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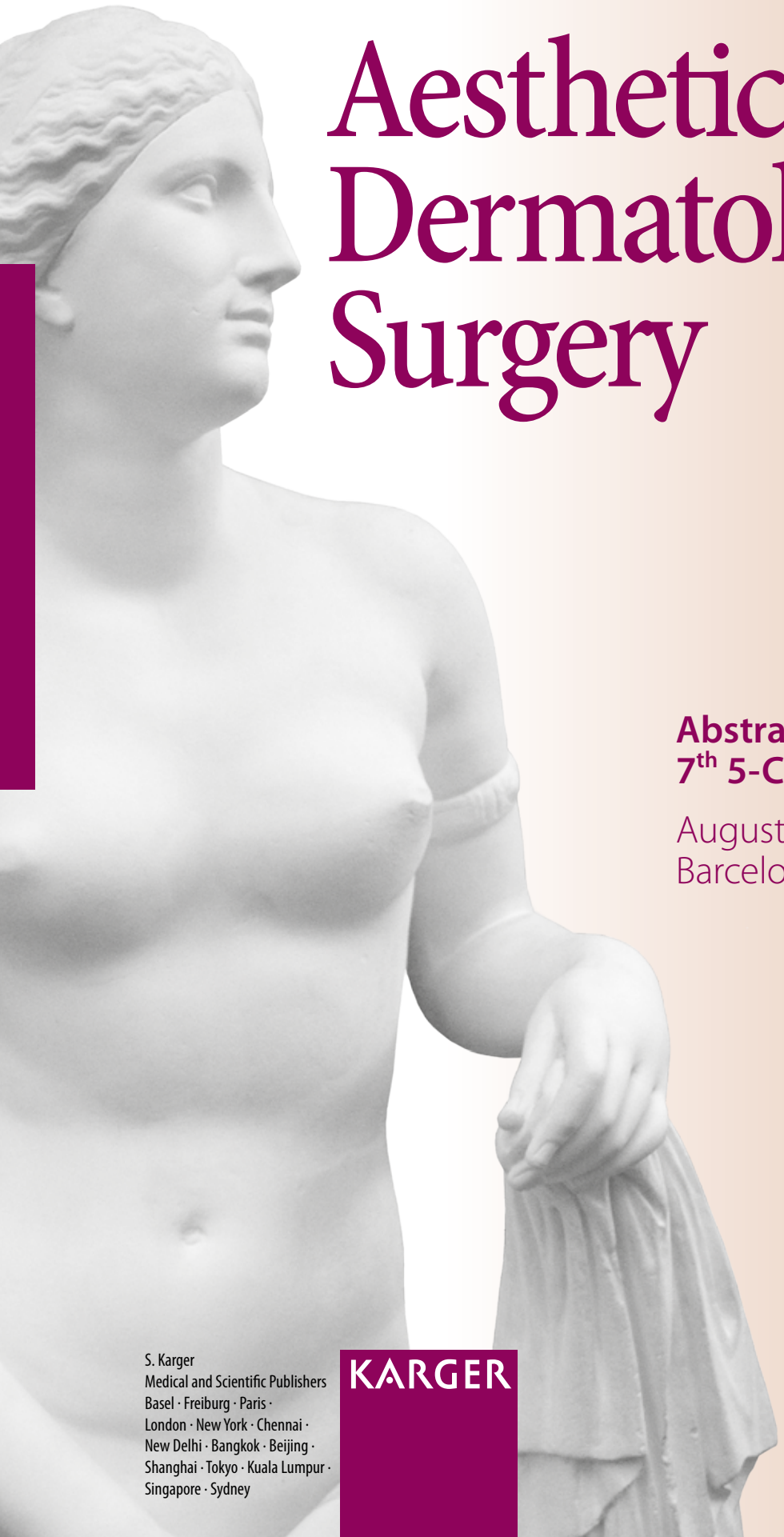
Aesthetics in Dermatology and Surgery

Journal of

5-CONTINENT-CONGRESS
5 CONTINENT CONGRESS
LASERS AND AESTHETIC MEDICINE

Abstracts of the 7th 5-Continent-Congress

August 31–September 3, 2016
Barcelona



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7th 5-Continent-Congress
August 31 – September 3, 2016
Barcelona, Spain

Welcome to the official journal of the 5CC conference. The 5CC is officially known as Lasers & Aesthetic Medicine on Five Continents, and over time, has become known as just the 5CC. Since the onset, we have strived to make our meetings some of the most outstanding in all of the global aesthetic community. As we prepare for the 2016 edition of the 5CC, we are confident that we have achieved our objectives, but will also promise that we will continually strive to make the 5CC better each and every year, with new educational and social activities, new initiatives in learning, and to utilize informational technology to keep up with the changing pace and face of aesthetics around the globe.

Planning and organizing an international congress is not easy and finding new ways to teach and explore the various facets of our business remains a challenge for everyone associated with meetings and congresses, no matter where they are from. The 5CC has achieved a global reach and that was always one of our prime focuses – to have leading clinicians from all over the globe present cutting edge technology and science to us all. And in 2016 we are pleased to announce that we have over 140 incredible dermatologists, plastic and facial plastic surgeons, and aesthetic experts from over 30 countries and from all of the continents.

The meeting covers all aspects of energy based systems, of the injectable fillers and neurotoxins, as well as other facets of aesthetics – from peels to scars to photodynamic therapy. In addition, we have courses on the business of medicine – from social media to practice management and everything in between. In other words, there is something for everyone at the 5CC, and we are thrilled to be hosting the 2016 edition in the beautiful city of Barcelona, Spain.

In addition to many new programs and initiatives, one of the most exciting for the 5CC team is to launch this new journal – The Journal of the 5CC Congress. This has been a several year endeavor with its fruition being this inaugural journal. We are pleased, proud, and humbled that we have been able to publish a journal which showcases the stories and talents of our esteemed faculty and guests from all over the globe.

In this inaugural edition, all of the abstracts that were brought to the 2016 5CC meeting are released here. Several of our wonderful faculty have shared with us their presentations in written form, and we are pleased to present their work here as well. We want this Journal to showcase aesthetic medicine – from all reaches of the globe, and in doing so we can share our incredible journeys with one another and share our love of aesthetic medicine.

Welcome to the Journal of the 5CC Congress!

MICHAEL H. GOLD, MD
Congress President

GENERAL INFORMATION

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WEDNESDAY, AUGUST 31, 2016

HOME-USE DEVICE SYMPOSIUM
CHAIR: GODFREY TOWN

2016 Home Use Devices - Survey Monkey
Dominique du Crest, France

Introduction / Objectives: The objective of this talk is to provide a brief overview of 2016 Home Use Devices (HUDs) survey monkey results and review key question: What do physicians know about HUDs? What do HUDs need to do to gain credibility in the professional environment? Is the HUD segment a threat or an opportunity? To which type of regulations HUDs should comply?

Materials and Methods: Following the initial survey monkey done from July-August 2015 a second survey was initiated in June-July 2016 to better understand doctors' understanding about Home Use Devices. The existence of the survey was promoted via Logi-Vent email data base and via Twitter.

Results: The majority of physicians recognize the existence of HUDs, and acknowledge that they mostly heard about them via a professional setting. Physicians would like to see more efficacy and safety published data. They don't see HUDs as a threat for their business but as an opportunity. Beyond current HUDs segments (acne, anti-aging, body, cleansing and hair removal), they envision such devices for numerous skin conditions.

Market Data and Future Trends
Dominique du Crest, France

Introduction / Objectives: The objective of this talk is to provide a brief overview of the consumer-driven home use device market and to answer key question: What is the size of the home use device market today (Europe, U.S., Asia)? How significant is this consumer trend? Which elements relate to beauty and which to therapy? What are physicians' reactions to home use devices? Are they allies or enemies?

Materials and Methods: Desk research was accomplished using via PubMed, search engines and websites. We had access to 2015 KLINE market research. We conducted more than 30 interviews with dermatologists, plastic surgeons and nurses across 3 continents, and 10 countries worldwide early 2014 and made a survey monkey in June-July 2016 to better understand doctors understanding about Home Use Devices.

Results: While consumers continue to investigate the latest consumer personal care products (acne, anti-aging, body, cleansing and hair removal), aesthetic physicians specializing in non-invasive interventions are witnessing the arrival of a new wave of technology-driven cosmetic devices. At the same time, dermatologists are witnessing the arrival of therapeutic home-use devices (acne in 2011, psoriasis in 2015). Key drivers in this market are: beauty multinationals entering the market, new product availability, physicians support and increased level of evidence provided.

Analysis & Conclusions: There is a clear and solid trend in the development of home based applications predicated on professional procedures; consumer cosmetic and device companies as well as professional device companies are both seeking to enter this market. There is no doubt that approaches combining professional interventions with home-use devices for maintenance treatments will be encouraged as they are mutually complementary. Leading clinicians see home-use device as an opportunity to expand their business.

In our view it is critical that this consumer trend should be supported by a clear regulatory framework and rigorous scientific investigation to ensure that long term safety and claimed efficacy are scientifically demonstrated. The market of Internet of Things, sensors or captors is increasing very quickly. In the years to come 'quantified self' (quantified skin) will be inherent in home use devices, enabling better tracking and better support services.

Home-Use Devices: Technology, Data and Claims – a Retailer's Perspective
Ian Marlow, United Kingdom

With the rapidly increasing market in, and expectations from, consumer home use of electrical beauty devices, comes an even greater requirement for retailers to list products that are truly effective. The benefits and claims should be clearly and truthfully described to consumers. This presentation will highlight the key technical requirements for claims support that any developer of a home use device should meet – the essential first steps to any commercial discussions.

Sub-Dermal Facial Skin Tightening Combining Bi-Polar RF, Red Spectrum LEDs and Infrared Heating
Moshe Mizrahy, Israel

It is well known that in order to achieve the best results from a skin rejuvenation procedure – it is important to treat all levels of the skin, from the epidermis to the subdermal fat at the same time, and to bring all layers to a temperature of 42 degrees centigrade to ensure the 3 major desirable clinical results: texture, improvement of coloring and tightening of wrinkles.

The combination of treating facial skin simultaneously with a device that generates 3 different types of energy:

- Infrared heating for superficial treatment and texture
- LEDs red spectrum for treatment of the dermis to improve coloring and to generate new collagen
- Bi-polar RF to treat deeper layers of the dermis as deep as the sub-dermal fat, for tightening and treatment of wrinkles ensure the best efficacy in one combined treatment.

A New Generation of Home-Use Hair Removal, Combining Optical and Galvanic Energy
Moshe Mizrahy, Israel

It is well known that optical energy in the form of IPL or laser destroys hair follicles to achieve permanent hair reduction.

In professional clinics, laser and IPL platforms can generate 40-50 j/sq.cm., combined with cooling of the upper layer of the skin. This high energy level can penetrate deep to destroy hair follicles up to 2 mm. deep. In order to ensure the same level of efficacy in a home-use device, using 5 j/sq.cm without cooling – it is important to expose the hair follicle to optical energy.

The use of galvanic energy prior to the optical energy pulse opens the hair pores and exposes the hair shaft and follicle to the optical energy for better absorption of the pulsed light by the melanin, thus achieving results similar to professional clinics.

In a study that was conducted in the US by Dr. Michael Gold – this combination also proved that dark-skinned people can also be treated safely.

Consumer Device Standards & Regulations
David Sliney, USA

Earlier this year the first international standard devoted to home-use devices was published by the International Technical Commission (IEC). This standard, known as IEC 60335-2-113, Edition 1:2016-4, was the first application-specific ("vertical") standard to address the safety of home-use-skin-care devices. Although initially drafted by a project group of experts in biophysics and dermatologic lasers, the draft underwent numerous edits by IEC Technical Committee TC61/Working Group 30, which made it more restrictive (and probably more vague, technically).

A key requirement of this standard is that a HUD incorporate a means for assessing the pigmentation level and for adjusting the output (if adjustable), which makes sense for visible and some infrared wavelengths, but has no meaning for some longer infrared wavelengths. It does allow for a colour chart to serve as the means to assess skin pigmentation level rather than sensors. It also requires for devices without an adjustable output, that the manufacturer provide a validation study on human skin showing that bulk tissue damage does not occur. If the HUD passes the tests and requirements, it should be labeled as a Class 1C device, although the comprehensive definition provided in IEC 60825-1:2014 (the basic IEC laser-product standard) has been so simplified that it could be confused with the general definition of any Class 1 product. The new IEC standard is a step forward, but some important safety tests are not well defined, and independent test houses will be challenged to interpret some of the standard's requirements.

On the regulatory scene, there are other actions underway. The European Commission Mandate on the safety requirements for consumer laser products will have an impact on HUD products. Also in Europe there is some expectation that the next regulations under the EU Medical Device Directive will include home-use laser and IPL devices as "medical devices." In the USA HUDs are already considered medical devices and require clearance; but it is not clear if the US Food and Drug Administration will accept the Class 1C product concept or completely accept IEC 60335-2-113.

Hair Reduction from Prolonged Use of a Home IPL Device
Eric van Kempen, The Netherlands

Prolonged use of a home-use IPL device for hair removal has been investigated in a 2-years study. A qualitative interpretation of the long term efficacy results, based on a hair growth simulation model, will be presented.

DASIL DERMATOLOGIC & AESTHETIC SURGERY COURSE 2016

CHAIR: MICHAEL GOLD

Invasive Radiofrequency Treatment

Stephen Mandy, USA

The latest innovation in skin tightening and fat reduction is invasive radiofrequency. The technology is unique is giving both precise deep tissue temperature at the point of the cannula and simultaneous skin surface temperature via thermography. By utilizing the variant between the two, it is possible to achieve outstanding fat reduction and skin tightening at the same time. This can be employed in the submental region and lower face, arms, abdomen and thighs with minimal invasion, little morbidity and excellent outcomes.

EUROPEAN LED ACADEMY SYMPOSIUM

CHAIR: MICHELE PELLETIER

Biofilms and Cold Inflammation

Patrizia D'Alessio, France

Introduction: Inflammation is characterized by 4 fundamental signs, respectively rubor, tumor, calor and dolor, associated with diminished organ function. When these signs become generalized, they are called chronic or "silent inflammation". In that case, detrimental effects are known to promote accelerated cell senescence and play an important role in atherosclerosis, cardiovascular disease and metabolic syndrome. Still, some forms of inflammation lack one or more of the abovementioned characteristics, such as absence of fever and sometimes even no pain. Here we propose a new terminology for those forms i.e. "cold inflammation".

Biofilms are the most common form of habitat of microorganisms constituting 80% of the microbial biomass of the planet. In biofilms, bacterial cells are maintained inside a polymeric matrix composed of exo-polysaccharides, proteins and nucleic acids. Their development is initiated by extracellular signals of the environment or by bacterial cells themselves. Biofilms can build up within a few hours. The biofilm matrix is highly hydrated and contains up to 97% water. In water, the structure of biofilms is influenced by light. In the human body, most of the biofilm is nested in the GI tract. It is the site of immune tolerance and can become the receptacle of long-lasting asymptomatic chronic inflammations based on rerooting of the immune system by the microflora.

It is known that blue light is an anti-microbial agent via several mechanisms including SOD stimulation with consequent disruption of biofilms through ROS. Light can also act on bacteria in photodynamic fashion using ex gr intrinsic porphyrins.

Material and methods: From mouth to colon, microflora populating the gut is organized in biofilms in humans. Biofilms shelter bacteria from the host immune system, antibiotics and antiseptics. Biofilm is not accessible to observation, except in the dental plaque, which is reconstituted day after day. Indeed oral infections become more and more difficult to eradicate due to increased resistance to antiseptics and antibiotics. An alternative unspecific mechanism consists of using Photo Dynamic Therapy (PDT). In presence of photosensitizer (non toxic dye) and light, the generation of oxygen species is able to damage bacterial structures and exert an antiseptic effect.

Results: PDT has been shown to be useful in the treatment of periodontal disease by disrupting biofilms from the root surface of teeth. The dyes shown to be active with low power lasers are methylene blue, toluidine blue, malachite green or indocyanine green at the proper wavelength they induce free radicals and singlet oxygen which are toxic to bacteria.

Conclusions: Light has been used as therapy since the antiquity. Once forgotten, it was rediscovered at the beginning of the XXth century. In order to be effective photosensitizers must not be toxic to host cells and present toxicity only after activation by light. They must remain excited long enough to lead to the production of cytotoxic species (mostly ROS) able to kill bacteria.

Light, photosensitizers and oxygen, the three major actors of phototherapy can be used to affect biofilms hosting microbiome, which are entertaining some sort of cold inflammation reaction, without fever, pain or edema. At the current state of technical development, this intervention is limited to the oral mucosa, but numerous targets could be imagined i.e. at pulmonary and gut mucosae.

How Blue LED Can Be Effective On Acne Disorders

Linda Fouque, France

We are no longer in the dark ages as far as acne treatments are concerned.

What do I mean by that?

Many of the treatments for acne cause secondary effects. For example resistance to antibiotics, depression with Roacutane, scars due to incompetent treatments and so on.

We no longer have to accept that. There is a more modern solution. At my clinic I created and tested a combination treatment that produces consistently excellent results with no side effects. For example, I have one patient that tells me how grateful she is that I cured a problem she had been suffering with for twenty years. She was thirty-five when I met her. Her acne has started at age fifteen. She had tried every treatment without success. I used her as an example because she is typical these days of what is called: persistent acne in adult women.

The way I treated her is based on my research and clinical tests of the past eight years, which focuses on and treats the multifactorial causes of acne in two primary ways: first LED photobiomodulation (PBM) and second creams and peelings when needed.

My conclusion is that LED PBM can stop and prevent the vicious cycle of acne.

It is well known that Propioni bacterium Acnes (P.acnes) is the main cause of acne lesions and the persistence of acne. LED PBM is efficient on acne lesions due to the antibacterial and anti-inflammatory effects of blue light, which are well documented.

My collaboration with Ashland Laboratory has allowed me to identify other positive effects. These studies were confirmed by a multicenter clinical study of LED Academy clinicians.

In my talk I will give details of all my findings and results.

Low-Level Light Therapy on Tissue Repair

Klaus Fritz, Germany

The use of low level laser (light) therapy (LLLT) has recently expanded to cover areas of medicine that were not previously thought of as the usual applications such as wound healing and other inflammatory conditions.

Since it is agreed that mitochondria are the principal photoacceptors present inside cells, and it is known that muscle cells are exceptionally rich in mitochondria, this suggests that LLLT should be highly beneficial in muscle injuries and tendons as well as the skin.

Low intensity light therapy is effective in the improvement of collagen fibers organization of the skin and collagen content making it ideal for speeding up wound healing and preventing hypertrophic scarring.

The ability of LLLT to stimulate stem cells and progenitor cells means that muscle satellite cells may respond well to LLLT and help to repair. Furthermore the ability of LLLT to reduce inflammation and lessen oxidative stress is also beneficial in cases of muscle fatigue and injury. The presentation will summarize results of studies and clinical experience.

How to Manage Inflammation After Aesthetic Procedures?

Susanne Hausdorfer, Belgium

Fractional ablative lasers or radiofrequencies are responsible for important oedema post treatment because of the epidemic injury, especially in the face and neck area. Down time with no adjuvant treatment goes up to 3 weeks with social eviction.

Associating a LED (IR/red) light on these ablative treatments in the same treatment session drastically reduces the downtime to only 48 hours. Treating on Friday and working on Monday.

The same wave length (850 / 630) can also be used once oedema has installed to shorten down time, such as in rhinoplasties, blepharoplasties, contact eczema following esthetic procedures such as injectables and mesotherapy. The healing process will be quicker and down time shorter.

Photobiomodulation and Clinical Parameters

Michèle Pelletier-Aouizerate, France

The use of LED entered our practice by photodynamic therapy. The treatment of diffuse actinic keratosis benefits widely. These "precancerous" lesions (Secondary mechanism) are caused by genetic alterations found pathological all around. It is connected to repeated exposure to various carcinogens. The background (Primary mechanism) is the seat of deregulation that amplifies degeneration. This is the field of cancerization.

Photobiomodulation of a lesion is first, photobiomodulation of a field: Photobioregulation, loco-regional and delay effects are other facets.

The reported clinical case allows us to discuss a strategy- leg ulcer is a beautiful illustration of our discussion in this respect:

- To evaluate the pathological level of injury
- Assess the area and the field of the latter
- The patient's general health condition
- The irradiation parameters

Photobiomodulation efficiency is strongly dependent of clinical diagnosis. Photobioregulation, loco-regional and delay effects could be starting points of a preventive medicine....

THURSDAY, SEPTEMBER 1, 2016 9.00 – 11.00h

FILLERS – WHAT'S NEW, WHAT'S NEXT?
CHAIR: MARK NESTOR

How and Where to Inject Fillers to Achieve a Successful Result
Beatriz Beltran, Spain

European data shows that 1 in 5 women are thinking about doing facial treatments. Aesthetic medicine is booming, but the economic crisis is a reality. Patients can't afford expensive treatments, so doctors need to develop cost-effective techniques.

I will explain how to achieve this without diminishing quality and safety. My technique is effective and efficient. Combining injections with different densities of AH fillers on strategic points. Working with facial proportions it permits a lifting of the face without getting too much volume. The results are natural, long lasting and without downtime.

Getting efficient results on a smaller budget ultimately improves client satisfaction.

The Longevity of Fillers: What Do We Tell Our Patients?
Ryan Greene, USA

The past decade has seen an exponential increase in the number of facial filler treatments performed worldwide. This can be attributed to patient awareness, the desire for non-surgical rejuvenation, and an increase in filler options and indications.

Despite the ubiquity of these treatments, most patients lack an adequate understanding of what these treatments entail. Their understanding and expectations of these filler treatments come from patient brochures and clinical trials data, which are often based on subjective clinical observations.

While these clinical trials seek to simplify filler longevity, there are number of patient-related factors that can affect the perceived clinical outcome. It is vitally important that treating physicians not only understand the concepts surrounding filler longevity, but also impart this knowledge to their patients as well. It is clear that patient satisfaction is enhanced if they better understand filler longevity as it applies to their own anatomy and other intrinsic factors. All of these issues will be presented, with a review of the scientific literature as well, with the aim of increasing the overall understanding of this vital topic.

Hyaluronic Acid: A Multi-Talented Polysaccharides
Christine Kreiner, Germany

Introduction and objectives: Hyaluronic acid-sodium salt with the international short name hyaluronan is a natural substance which exists in an identical form in all organs and liquids of vertebrates. Hyaluronic acid is not only found in the various areas of our body but also in all animals, fungi, bacteria and even viruses. Hyaluronan, worldwide used in medicine, has essential cytobiological functions and plays an important role in the regulation of intracellular signal transfer, cell proliferation and cell migration. Depending on the molecular weight and in this way on the length of the linear chains hyaluronic acid takes on different biological functions, which has to be considered if used for medical application.

The biological functions, the biocompatibility of linear as well as of crosslinked Hyaluronan and the pros and contras will be presented and discussed.

Materials and methods: In relation to the intended use, specific properties of Hyaluronan were selected, e.g. cross linkage degree and the degradation time by Hyaluronidase as well as the suitable viscosity were tested and optimized.

Results: The results of our investigations showed that an important factor are the "intrinsic viscosity" and that the degradation time of Hyaluronan by hyaluronidase depends strongly on the chemical properties such as crosslinked monophasic or biphasic or just linear which is an important factor for the stability and volumizing effect of dermal fillers .

In addition the amount of pendants in relation to the completely crosslinked Hyaluronan chains influence the biocompatibility of dermal fillers.

Conclusion: Hyaluronic acid, an ubiquitously existing polysaccharide which is responsible for a series of different cytobiological functions through interaction with the cells. This forms the basis for a multitude of possible applications of this simply built multi-talent, from mere viscoaugmentation to the possible treatment of tumors.

Anatomy of Aesthetics
Stephen Mandy, USA

Recent observations of anatomic variations not previously known or understood have altered approaches to aesthetic treatments.

Variations in the location of the angular artery, direct connection to the retinal artery by vessels in the periorbital region, location of fat pads and retaining ligaments all have an impact on the procedures and techniques we employ.

Illegal Permanent Fillers: Complications and Treatment
John J. Martin, Jr., USA

Intrduction: There have been an increased number of reports of illegal permanent fillers being administered to patients by non-physician injectors over the last few years. This has been a growing problem in the United States, where one person has even been arrested for injection of toxic substances such as fix-a-flat and cement for buttock's enhancement. There have also been multiple deaths and serious complications from these injections.

Most of the injections with illegal permanent fillers have been biopolymer, a type of silicone. It is usually injected in large volumes into the face, breasts and buttocks. While some patients have an immediate inflammatory response to the substances, some patients have late migration and inflammatory nodules which develop several months later.

Methods: Multiple patients who have had illegal fillers injected into the face have been examined and treated with a variety of modalities. These have included steroid injections, laser lipolysis and Ulthera.

Results: Many patients show some improvement with steroid injections. However significant softening and shrinkage of the nodules has been seen with Ulthera. In some cases surgical excision has been used to remove the nodules.

Conclusion: Illegal fillers into the face can produce significant disfigurement. While there is no way to remove the substance injected, improvement can be seen using a variety of modalities.

Biological Effects of Fillers
Pierre Nicolau, Spain

Injecting any product within the human skin induces a reaction, either to eliminate or to encapsulate it.

With time it has appeared through clinical practice that many fillers induce unwanted and unfavourable reactions, including those allegedly supposed not to induce such reactions, like Hyaluronic Acids or Acrylic Gels. These clinical findings are substantiated by histological proofs allowing to a better understanding of the mechanisms leading to unfavourable reactions.

Here are presented the mechanisms leading to these reactions, which can be beneficial, provided the injected filler has been specifically designed for this purpose.

We can then understand why some products achieve almost all of the requirements for a long lasting filling effect with minimal risks, and explain the difference between true safe bio stimulation (new mature collagen Type I) and Fibrosis (collagen type III).

MARKETING, SOCIAL MEDIA, PRACTICE- & PATIENT MANAGEMENT
CHAIR: DIRK-HARALD GRÖNE

The Importance of Interior Design for a Successful Practice
Dirk-Harald Gröne, Germany

In Germany, minor modifications of the consulting and treatment rooms such as a new furniture and/or paining are conducted every two years, every four years there are major constructional changes needed, whereas every ten years there are major building alterations taking place.

Most of these changes are driven by new legislation and or changes in patient flow and/or the integration of new technologies. This lecture will focus on the interior design for a successful practice and will consist of ten chapters outlining the somehow conflicting priorities and expectations of doctors and patients as to the design of the consulting and treatment rooms.

THURSDAY, SEPTEMBER 1, 2016 11.30 – 13.30h

ENERGY BASED DEVICES – INDICATIONS OUT OF THE BOX
CHAIR: CHRISTINE DIERICKX

Pico Second Lasers in Skin Rejuvenation
Stephen Mulholland, Canada

In this talk, Dr. Mulholland will review his extensive experience using Pico second wave length lasers (PicoSure 532/755nm, PicoWay 1064/532nm) for the treatment of Dyschromia, Acne scars, Rhytides, and overall Skin Rejuvenation.

Dr. Mulholland will review and discuss the use of these two popular Pico second lasers in the treatment of skin rejuvenation problems, as well as the use of fractionated Pico second devices in skin rejuvenation programs.

Dr. Mulholland will review the parameters, laser techniques and approaches, clinical indications as well as complications and risks with each laser.

Advances in Laser Rejuvenation: A New Non-Thermal Acousto-Interferential Method
Mario A. Trelles, Pedro Martínez-Carpio, Spain

The objective was to determine the efficacy and safety of a novel method of facial rejuvenation using a 2940-nm Erbium:YAG laser with Spatially Modulated AblationTM. A pilot study was performed in 16 women with moderate to severe signs of facial aging relative to chronological age, who underwent two treatment sessions with an Er:YAG laser coupled to the RecoSMATM technology (Linline, Minsk, Belarus).

The whole face was treated in all patients. Clinical efficacy, tolerance, adverse effects, complications, and histological changes due to the treatment, were evaluated. Clinical photographs and biopsies were taken before treatment and 3 months after the second treatment session.

All patients completed the study and presented no significant complications. Histological changes in the epidermis and dermis as a result of treatment were found. Fine lines, wrinkles and overall facial aging improved significantly ($p<0.0001$). The mean reduction of fine lines and wrinkles was 59% (r=40%-75%). The mean improvement of overall facial aging was 74% (r=55%-90%). After showing the patients the comparative photographs before and after treatment, 75% of women stated that they were satisfied or very satisfied, and would recommend the treatment. Preliminary results show an excellent safety/efficacy profile for this novel technology, which, based on observed results, can be considered to have advantages over other methods of facial rejuvenation with lasers.

FACING THE FUTURE OF FACIAL REJUVENATION
CHAIR: SUNEEL CHILUKURI

Facial Treatment with Acoustic Wave Therapy (AWT) to Improve Facial Skin Texture, Pores and Wrinkles
Maurice A. Adatto, Robyn M. Adatto-Neilson, Switzerland

Introduction & Objectives: Skin aging induces a loss of elasticity and skin texture changes, e.g. pore size enlargement, especially on the face, as these aging signs are aggravated by photoexposition. Acoustic Wave Therapy (AWT) proven efficacy in improving cellulite, thanks to an increased collagen production as well as increased metabolism through better blood flow. Knowing this, we hypothesized that the same technology could improve signs of aging on the face, such as skin texture, pores and wrinkles. The objective of this study is to demonstrate the efficacy and safety of AWT using Extracorporeal Pulse Activation Technology (EPAT) for facial signs of aging.

Materials & Methods: Twelve patients were treated with acoustic wave therapy (AWT), ten female and two male patients. The mean age was 53 years. All patients received six treatments at one week interval. The treatment was performed with the CELLACTOR SC1 "Ultra" (Storz Medical AG, 8274 Tägerwilen, Switzerland). Six patients received a treatment with the D-Actor handpiece, 10.000 pulses, 1.2 bar and six patients received the treatments with the C-Actor handpiece, 4000 pulses, 0.13 mJ/mm2. All patients had no parallel treatments i.e. peelings, injections or topicals. Pictures were taken with the Antera 3D camera (Miravex Ltd, Dublin Ireland) before the treatments and six weeks after the last treatment to compare skin texture roughness, pore size and depth of wrinkles. Pictures were also taken with a conventional digital camera and the patients provided self-assessment.

Results: Although pictures with the conventional digital camera did not show big differences, all patients showed measurable and significant results with the Miravex Antera 3D camera. Skin roughness showed an overall improvement of 28%, pore size was reduced by 48% and wrinkles depth and width decreased of 24%. All patients felt a difference by touching their skin. It felt firmer, tighter and plumper. No patient had side effects or problems after the treatments. Some patients had a little redness, which disappeared within 2 hours. No sun protection was r quired as it is not a light-based treatment. All patients would recommend the treatment.

Conclusions: AWT using EPAT for facial treatments is a safe and effective method for reducing signs of skin aging on the face.

Histologic Evaluation of Mechanism of Action of the-New Fractional Handpieces of Picosecond Laser 532 and 1064 nm in Human Skin for Rejuvenation
Adriana Ribe, Spain

Background: Fractional laser treatments were first introduced by Dr. Manstein in 2004 with non-ablative lasers. Currently, the new laser technology with picoseconds devices, first created to remove tattoos, provides fractional hand pieces to treat fine wrinkles, acne scars and melasma. The underlying mechanism of action at histological levels has not been extensively studied yet.

Study: 3 female patients (ages 45-65 y/o) with photoaging were selected for the study. They were divided in 3 groups and received 1 laser treatment. Group I: 4 passes treatment with the 1064nm Resolve hand piece at 2mJ; group II: 4 passes treatment with the 532nm Resolve hand piece at 0.5mJ and group III: 3 passes treatment with the 1064nm Resolve handpiece at 2mJ and 3 passes treatment with the 532nm Resolve handpiece at 0.3 mJ. A 3 mm punch biopsy was performed on the skin of the neck immediately after the treatment.

Result: Clinically, patients experienced erythema which resolved within 1-3 hours after the treatment. Histologically the punch biopsy after the laser treatment showed:

- Group I: intraepidermal vacuoles with intact strateum corneum. Dermis with ectatic vessels and lymphatics, extravasation of red cells and some collagen denaturation at 300µm.
- Group II: Dermis with ectatic vessels and lymphatics, extravasation of red cells and some collagen denaturation at 150µm.
- Group III: Dermis with ectatic vessels and lymphatics, extravasation of red cells and some collagen denaturation at 300µm. Minimal changes in the epidermis.

Conclusion: Histological skin analysis immediately after laser treatment with the new fractional hand pieces 532 and 1064nm of picoseconds laser showed changes in the epidermis and dermis with intact strateum corneum. These changes in the skin due to the photoacustic effect might traduce in neocollagenogenesis, breakdown of fibrosis in scars and pigment breakdown in melasma. Correlation with the histologic and clinical results in photoaging, melasma and acne scars are necessary. The histological results are promising since they demonstrate significative changes in the epidermis and dermis with intact strateum corneum which will translate in clinical results with minimal or no down time.

(NON-INVASIVE) LIFTING METHODS – SPECIAL FOCUS ON THE EYE
CHAIR: JOHN J. MARTIN JR.

When & How: EBD Blepharoplasty
Diane Duncan, USA

While nonexcisional techniques are commonly requested by patients, in many cases only surgery offers full correction of the aesthetic concern. In discussing treatment options with patients, it's important for the practitioner to know the capabilities and limitations of "surgical vs. nonsurgical" options.

Surgery is commonly thought of as using a "cutting" technique to remove, rearrange, or tighten skin. Nonsurgical approaches can be divided into those that are noninvasive and those that are minimally invasive.

In the periorbital region, totally noninvasive options include external microfocused ultrasound and external moving RF. Microneedling and RF needling are options that penetrate the superficial skin layers only. Laser resurfacing also treats the epidermis and superficial dermis. Fillers can be used to add volume, and Botulinum toxins can be used to decrease dynamic lines.

Minimally invasive options include heating the underside of the skin with monopolar or bipolar radiofrequency devices or a laser fiber.

Surgical procedures commonly include a variety of approaches for blepharoplasty, and either open or endoscopic brow lifts.

As one might expect, the results with totally noninvasive approaches are definite but modest. Managing expectations is key when this approach is chosen. Surprisingly, treatment with some of the apparently superficial options can achieve an outcome which favorably compares with a surgical brow lift or blepharoplasty.

Erbium laser resurfacing and RF needling can create skin

surface area contraction that appears, in mild to moderate cases, similar to results obtained with a surgical brow lift or blepharoplasty. These device types are better at wrinkle reduction and skin texture improvement than the surgical approach. However, limitations of the minimally invasive procedure include an inability to correct fat pad protrusion or a tear trough deformity in the lower eyelid. If skin excess in the upper lid is severe, a combined approach may be needed. Also, if brow ptosis is severe, a less invasive approach will not be successful.

Guidelines for best options in clinical situations are helpful in decision making for both patients and their treating physicians.

Ptosis Repair - A Simplified Approach With Levator Aponeurectomy
John J. Martin, Jr., USA

Introduction: There are many options available for repairing ptosis. A levator aponeurectomy is a technique that should simplify ptosis repair, decrease contour abnormalities, and decrease surgical time. A levator aponeurectomy entails a modified dissection of the aponeurosis. A segment of the aponeurosis is excised from the anterior surface of the tarsus, and it is not separated from Muller's muscle. The superior cut edge is advanced and hooked to the distal fibers of aponeurosis under the pretarsal orbicularis.

Methods: A retrospective chart review was done for 30 consecutive patients with bilateral ptosis who underwent levator aponeurectomy with concurrent blepharoplasty. Age, pre and post-op marginal reflex distances (MRD1), eyelid contour, need for reoperation, and complications (undercorrection and overcorrection) were recorded.

Results: The mean preoperative MRD was 1.25mm OU. The mean post-op MRD was 3.20mm OD and 3.23mm OS. The surgery had an 87% success rate, with 52 of 60 lids with an MRD of > 3mm post-op. Of the 60 eyelids corrected with this procedure, there were no overcorrections, and no contour abnormlaities.

Conclusions: External ptosis repair by levator aponeurectomy gives excellent post-op results with few contour abnormalities and decreased surgical time.

Double Eyelid Procedure: Orbicularis-Levator Fixation Technique
Adolfo Napolez, USA

Asian eyelids have several characteristics that distinguish them from the eyelids of people from European and African descent. These include: 1) low, poorly defined or absent lid creases, 2) pronounced fullness to the upper and lower lids, 3) narrow palpebral fissures and 4) epicanthal folds. The extent to which these anatomic variants are present, determines the height and prominence or absence altogether of the upper lid crease in the Asian eyelid. Asian blepharoplasty is the most common Cosmetic Surgery procedure done in the Far East, with many variants noted.

The discussion will include the patient selection, preparation, anaesthesia, and surgical technique utilized in the operation for the creation of the double eyelid in the patient.

Complications, Unfavorable Results and Critical Analysis of the Double Eyelid Procedure
Adolfo Napolez, USA

The Double Eyelid Procedure is one that is potentially fraught with unfavorable results as well as numerous complications due to the fact it is a procedure based predominantly on symmetry, precision and tissue characteristics with errors measured in millimeters. Coupled with significant expectations often times unrealistic from the patient's perspective. Who may routinely view a normal, expected outcome as an unfavorable result?

Potentially unfavorable results can range from crease size dissatisfaction, relapse to a single eyelid, asymmetry, and multiple creases as well as high or thick fold.

Whereas, possible complications can range from ectropion, ptosis, ocular injury, hypertrophic scarring, milia as well as suture granuloma.

There is probably no other facial cosmetic surgical procedure that is more dependent on exactness and precision, coupled with patient expectations and visibility then the Double Eyelid operation.

Absorbable Suspension Threads with Cones: 4 Years Experience
Roberto Pizzamiglio, Spain

Introduction: Silhouette Soft is a well-known procedure for facial rejuvenation worldwide. In the last four years, more than 130000 patients have been treated around the world by doctors with a high level of patient satisfaction. The Polylactic-Acid (PLLA) bidirectional threads with cones bring together all the advantages of a non-surgical device: total absorption in two years, immediate visible results, no pain during the procedure and no downtime. New histological studies have demonstrated new collagen production stimulated by the PLLA.

Material and Methods: The anchorage of cones in the adipose tissue (whilst waiting for the fibrous tissue production, which will render the cones no longer necessary) has been proven to be an efficient support system for soft tissues.

After meticulous skin disinfection, local anaesthetic is injected only in the entry and exit points. 1.5 cc of anaesthetic solution with adrenaline is sufficient per thread.

The procedure starts by creating an entry point with an 18G intramuscular needle in the middle of the path. With the first needle of the suture, we insert the first half of the series of cones into the subcutaneous tissue. From the same entry point, with the second needle, we insert the second series of cones in the opposite direction. Finally, using a sterile pair of scissors, the needle is cut off from the residual thread. The same procedure is repeated for all the sutures. The procedure is completed with fat compression to achieve the desired result.

Results: The author will present the European experience with Silhouette Soft treatment, along with its indications and results in the face, neck and brow.

Conclusion: The non-surgical anti-ageing facial procedure, together with fillers, botulinum toxin and rejuvenating, stimulating treatments, is now enhanced with bidirectional sutures to address tissue sagging.

THURSDAY, SEPTEMBER 1, 2016 14.30 – 16.30h

LASER – THE ORIGINAL ENERGY-BASED DEVICES
CHAIR: MOSHE LAPIDOTH

A Resurfacing Treatment with Enhanced Patient Experience: Use of a Novel Hybrid Fractional Laser
Maurice A. Adatto, Switzerland

Background: Intrinsic aging and long-term ultraviolet light exposure results in visible signs of skin aging, including wrinkles, discolorations, scars and laxity. Ablative fractional resurfacing is a well-established treatment that vaporizes aged tissue with less thermal injury, with mild to moderate levels of morbidity. Conversely, non-ablative fractional resurfacing causes thermal injury and tissue coagulation with lower levels of morbidity. A novel hybrid fractional laser combines ablative and non-ablative wavelengths delivered to the same microscopic treatment zone to maximize clinical results and minimize downtimes. Treatment with a hybrid fractional laser safely demonstrates clinical efficacy and enhanced patient experience.

Methods: Prospective study of 25 patients treated with a novel hybrid fractional laser (Halo™, Sciton, Inc.) delivering ablative 2940nm and non-ablative 1470nm wavelengths to the same microscopic treatment zone. Complexion analysis data was used to quantify clinical results of the hybrid fractional treatment including pigmented lesions, vascular structures, wrinkles, pore counts, and texture. Photography is provided to independent evaluators to confirm clinical results.

Results: Treatment was safe, with no unexpected adverse events reported. No to moderate pain scores were recorded (visual analog scale 0-10); 1-3 for shallow, low coverage treatments and 3-5 for deep, high coverage treatments. Subjects were consistently healed at five days post-treatment with average healing duration of 4 days. Before and after photographs demonstrated improvement in wrinkles, dyschromia, laxity, skin texture, scars and pore size.

Conclusions: The development of a novel hybrid fractional laser technology combining ablative and non-ablative wavelengths provides a breakthrough treatment. Delivering coincident or adjacent wavelength pulsing, together with tunable ablation, coagulation, depth, and coverage offers individualized treatment parameters. The ablative intraepidermal response is synergistic with the non-ablative dermal coagulation wound healing to produce exceptional resurfacing results with an enhanced patient experience. Consistent, efficacious clinical results were achieved with a single treatment. Hybrid fractional laser treatment improved wrinkles and dyschromia resulting in bright, reflective, more youthful skin. Patients experienced the clinical resurfacing results of an ablative treatment with the downtime expected of a non-ablative treatment.

The Picosecond Pulsewidth Is Not a Magic Wand
R.-Glen Calderhead, South Korea

Much has been made of the recently-introduced picosecond (ps)-domain Nd:YAG lasers, with claims of more effective tattoo removal and more efficient treatment of difficult-to-treat lesions such as melasma. However, the practitioner must carefully weigh the reported efficacy against the vastly increased price of these systems compared with the ns-domain Q-switched systems, and the important return on investment.

It has been shown that a high fluence Q-switched ns-domain system was more effective than a low fluence ps-domain system for pigment removal, so it would appear to be necessary to increase fluences for ps-domain systems, at least for the Nd:YAG systems. Likewise, the existing 1064 nm and 532 nm wavelengths still leave something to be desired when treating multicoloured tattoos, or tattoos which have proved recalcitrant to ns-domain laser removal, with a ps-laser.

The addition of a visible yellow and visible red handpiece, combined with higher pulse energies, would therefore increase the potential range of indications of the ps-domain laser, and make it more attractive to the practitioner. The addition of the picosecond domain does not automatically make picosecond lasers superior to a good ns-domain system, especially when the pulsewidths of current ps-domain lasers are still in the high end of the picosecond range, and very much at the high end of the price range.

Erbium:YAG Laser for Treatment of Enlarged Pores
Woraphong Manuskiatti, Thailand

Dilated (enlarged) skin pores refer to conditions that present with visible topographic changes of skin surfaces. Although not a medical concern, enlarged pores are a cosmetic concern for a large number of individuals, especially in women. Possible causative factors of enlarged facial pores include many exogenous and endogenous factors, such as sex, genetic predisposition, aging, chronic ultraviolet light exposure, comedogenic xenobiotics, acne, and seborrhoea.

Therapies to attenuate facial pores include medical and procedural treatments. A variable square pulse (VSP) erbium:yttriumaluminum-garnet (Er:YAG) laser resurfacing has proven effective in wrinkles and atrophic scars. A recent study using VSP Er:YAG laser for treatment of dilated pores in a series of 19 patients with 6-month follow-up period will be presented. Significant improvement of dilated pores was noted staring at one month after two treatments. Maximal improvement was observed at one month after four treatments. No adverse effect was found at any follow-up visits. A proposed mechanism of Er:YAG laser for this condition will be discussed.

The Evolution and Revolution of Skin Resurfacing
Ines Verner, Israel

Hippocrates said: "The natural forces within us are the true healers of disease". Skin resurfacing in all its forms uses these natural forces by using the wound healing mechanisms of our body.

In the past complete ablative resurfacing was commonly used for skin rejuvenation. Although results were dramatic, risks and side effects were high (mainly the risk for hypopigmentation and scarring).

The introduction of fractional resurfacing technologies both ablative and non-ablative, has introduced a tremendous change in our abilities and understanding of skin resurfacing. This revolution has changed our scope.

In this presentation we will discuss ablative and non-ablative technologies of skin resurfacing. The new and upcoming technologies together with our current understanding of wound healing mechanisms.

NEW DIMENSIONS IN COSMECEUTICALS & SKIN CARE
CHAIR: JOEL SCHLESSINGER

Brightening, Hydrating and Protecting: The Latest Trends in Cosmeceuticals and Nutraceuticals
Jeanine B. Downie, USA

The global cosmeceuticals market is expected to grow at a compounded annual growth rate of 8.62% from 2016 to 2019 (Steamfeed, 2015). The US demand for cosmeceutical products increased 5.8% annually through 2015. Antioxidants are the largest category, while botanicals continue to see the fastest gains. The US cosmeceutical industry is currently estimated at 6.5 billion dollars. Age-defying products and sunscreens are a key part of cosmeceutical growth (Freedonia, 2015). Cosmeceuticals are expected to grow another 30% by 2020 (Maheshwari, 2015).

This discussion will focus on evening out and brightening the individual's skin tone, hydrating the skin and protecting the skin. The ultimate goal is to slowdown cutaneous aging as much as possible.

I will discuss cosmeceuticals and nutraceuticals, proper application and managing patients' expectations. Excellent standard medical photographs are mandatory. Physicians and cosmeceutical companies need to understand mechanisms of action, product claims and what consumers want.

Finally, use of a dermatology – tailored strict topical regimen is very helpful to patients that are serious about controlling and reducing their hyperpigmentation.

HAIR – DISEASES, REGROWTH, REMOVAL & RESTORATION
CHAIR: BRADLEY BLOOM

Hair Diseases
Mohamed Amer, Egypt

Hair diseases are a very common disorder that faces each dermatologist daily. How to diagnose the right disorder and to handle such patients needs a lot of effort to sort out the best treatment that helps patients, especially females whom complains of their hair daily.

Stem cell topical or injection became one of the very commonly used methods to increase hair and deal with many hair diseases and gives great result.

This talk will cover the effect and results of stem cells injection for hair.

Synthetic Hair Implant in Androgenic Alopecia
Ghislaine Beilin, France

Hair Transplant and prosthetic hair implantation suffer from many drawbacks. While hair transplantation is adopted by the medical community as an accepted procedure for hair restoration the implantation of prosthetic hair fibers is controversial. The commercially available prosthetic hair fibers are in the market since the late 90's but they are not widely used. The drawbacks include a single hair implantation technique, which leads to long and sisyphean procedures and implantation of a significant foreign body. A new and innovative technology is aiming to revolutionize the hair implantation field and change the way it is perceived. The new technology offers a minimal invasive, simple and quick procedure for simultaneous implantation of many implants, utilizing single button disposable cartridges preloaded with hair implants. The purpose of this presentation is to introduce the new technology, results from a histological study and interim results from an on-going multi-center clinical study.

Minoxidil Dose Response Study in Female Pattern Hair Loss Patients Non-Responders to 5%
Andy Goren, USA

Topical minoxidil is the only US FDA approved drug for the treatment of female pattern hair loss. The maximum strength of the legally marketed topical minoxidil in the US (5% minoxidil topical foam) is effective in regrowing hair in only a minority of women i.e., approximately 30%; thus, the majority of female pattern hair loss patients remain untreated.

Previously, we have demonstrated that non-responders to 5% topical minoxidil foam are low metabolizers of minoxidil; thus, we hypothesized that increasing the bioavailable minoxidil to low metabolizers will increase the number of responders to topical minoxidil without increasing the rate of adverse events. In this study, we recruited female pattern hair loss subjects that were identified as non-responders to 5% topical minoxidil foam utilizing the previously reported sulfotransferase assay.

A novel topical solution of 15% minoxidil was applied daily during 3 months. Preliminary results of our pilot study have demonstrated clinically significant response based on hair counts increase from baseline (over 15%) as well as global photographic assessment compared to baseline. None of the subjects experienced significant hemodynamics changes. To the best of our knowledge, this is the first study to demonstrate the potential beneficial effect of higher concentration of minoxidil in female pattern hair loss subjects that fail to respond to topical 5% minoxidil.

THURSDAY
SEPTEMBER 1, 2016
17.00 – 18.00h

ACNE & ACNE SCARS TREATMENT – MY BEST RESULTS
CHAIR: DAVID GOLDBERG

Acne Treatment via Selective Photothermolysis of Sebaceous Follicles with Laser and Gold Microparticles
Maurice A. Adatto, Switzerland

Background and Objective: Selective photothermolysis of sebaceous follicles by enhancing the follicular contrast by localized delivery of inert gold microparticles chromophore has been demonstrated (Ref. 1). In this study, a clinical investigation was undertaken to evaluate effect on inflammatory acne.

Methods: An Ethics Committee approved study was conducted. Sub-micron inert gold microparticles, engineered for strong near-IR light absorption, were formulated for selective delivery into sebaceous follicles. The formulation was applied topically and massaged into facial skin. This was followed by 810 nm laser optical pulses (Palomar Vectus). Six subjects (mean age 22 years, skin types 1-3, 50% female) were treated three times at 1-week interval with radiant

exposure 25-32 J/cm2, pulse width 30 ms, spot 12x12 mm, and 2 passes. Subjects were asked to rate discomfort on 0-10 scale. Inflammatory lesion counts and Investigator's global assessment (IGA) of severity were performed at baseline, 8- and 12-weeks. Retreatment was planned if lesion count change did not reach -40% threshold at 12-weeks.

Results: At 8-weeks post baseline, the mean inflammatory lesion count change was -51% (N=6, SD=27%). At 12-weeks post baseline, the mean inflammatory lesion count change was -60% (N=5, SD=13%); individual changes were -69%, -61%, -44%, -76%, and -50%. This compares favorably with Study 2 (Ref 2, mean change -49%). All reached -40% lesion change; and no retreatments were necessary. At 12-weeks post baseline, 4 of 5 (80%) subjects showed reduction in the IGA score. Transient erythema and edema were noted after treatment. Treatment was tolerated well (mean discomfort 4).

Conclusions: A treatment of topically delivered chromophore consisting of near-IR absorbing gold microparticles, followed by 810-nm optical pulses appears to be successful, well tolerated, and safe for treating acne vulgaris.

References:

1. "Acne Treatment Based on Selective Photothermolysis of Sebaceous Follicles with Topically Delivered Light-Absorbing Gold Microparticles," J Invest Dermatol., 2015, 135, 1727-34.
2. Owczarek, et al., "A Randomized, Controlled Clinical Trial with Gold Microparticles for Acne Treatment," Late Breaking Abstract, 2015 ASLMS meeting.

Combined Non-Ablative Laser and Vacuum Systems in the Treatment of Acne Vulgaris

Maria Angelo Khattar, Dubai

Acne vulgaris affects millions of people worldwide and has a potentially significant psychosocial impact on patients. Though the exact pathogenesis of acne is still unknown, many studies have suggested it is a disorder of the pilosebaceous unit that includes three main factors; increased androgen-induced sebum secretion, obstruction of the follicular ostia and proliferation of Propiobacterium acnes. The resultant inflammatory lesions including papules, pustules, nodules and cysts may lead to long- term sequelae in the form of atrophic scars.

The multiple treatment options for acne vulgaris include topical as well as systemic medications, the most effective being isotretionine. However, the plethora of side effects of the drug has led to the development of alternative technologies for the treatment of the condition including visible and infrared light sources.

The new ClearSkin™ laser is the first technology to combine a non-ablative 1540-nm laser with simultaneous contact cooling and vacuum technology to treat acne. The external vacuum stretches the skin and allows penetration of the laser light to depths of 1000 um which corresponds to the depth of the sebaceous glands. This results in the photothermal damage of the sebaceous glands and pripionobacterium acnes. Furthermore the photothermal skin remodeling leads to a wound healing effect and subsequent reduction in the depth of atrophic acne scars. The simultaneous cooling of the skin decreases thermal side effects and makes the treatment safe for all skin types.

Patients with mild to moderate acne received four to six treatments with 2-week intervals with good clinical improvement in both the inflammatory acne lesions and atrophic acne scarring.

Acne Scarring: New Devices and Fillers

Amy Taub, USA

Reduction of acne scarring continues to be a very important and somewhat unmet need in the cosmetic arena. Difficulties include the variety of scar types with different physiologies, as well as the volume loss that often accompanies scars.

Combination therapy has long been touted as the best route for results, yet this can be a very expensive endeavor as well as time consuming for the patient and often can result in significant downtime. Finally, many of the treatments only improve the scars by a fraction, even if half, yet most acne scar sufferers would prefer a more complete improvement, due to the to their emotional toll the scars exact on their psyche.

Newer treatments, such as radiofrequency or plain microneedling offer less downtime, whereas new fillers which are very long-lasting are helping to correct volume deficits. Together these newer treatments offer less risk, and downtime possibly lower economic impact and a higher percentage of improvement than older treatments.

WHAT PDT CAN DO FOR YOUR PATIENTS

CHAIR: JARED JAGDEO

Adjunctive Role of Light-Emitting Diode Phototherapy for the Aesthetic Surgeon

R.-Glen Calderhead, South Korea

Since the development of the 'NASA LED' in 1998, the light-emitting diode has attracted interest in LED-low level light therapy (LED-LLLT) as a stand-alone monotherapy approach for rejuvenation and wound healing.

However, and even more interesting, LED-LLLT has achieved what is proving to be a valuable adjunctive role in aesthetic, cosmetic and antiageing medicine. In particular, the deep-penetrating wavelength of 830 nm in the near-infrared has attracted a great deal of attention for its ability to produce excellent results in skin rejuvenation and to accelerate and enhance post-procedure wound healing.

830 nm LED-LLLT is delivered from planar panels of LEDs. The main targets for this wavelength are the dermal cells: mast cells, macrophages, neutrophils and fibroblasts, and also the vascular system. Epidermal keratinocytes are also an interesting target since the epidermis also needs to be renewed in any antiageing or rejuvenation procedure. Post-procedure treatment is delivered immediately after treatment and then at 24 and 72 hr later. Subsequent sessions can be given twice per week as required.

830 nm LED-LLLT has been proved to work well at tissue, cellular and subcellular levels, is easy to deliver, side-effect and pain-free, and is well tolerated by patients of all ages and skin colours. Furthermore, it is clear that 830 nm LED-LLLT at appropriate parameters has a powerful role to play in the daily practice of the plastic, aesthetic and antiageing practitioner.

Enhancement of Photodynamic Therapy for Medical and Cosmetic Indications

Amy Taub, USA

Photodynamic therapy is used worldwide for the treatment of actinic keratosis, non-melanoma skin cancer, acne, photorejuvenation and a host of other medical treatments. Many different techniques have been adopted to enhance the results by making each treatment more effective, have less downtime or pain, or require fewer treatments to achieve effects.

These effects include improving penetration of the photosensitizer such as with microneedling or pretreating with various prescription or non-prescription creams, increasing the yield of sensitizing agent by heating the skin during incubation and reducing discomfort by using daylight or short exposure/long light exposure.

There are many different effective strategies to improve effectiveness and reduce side effects of photodynamic therapy.

HYPERHIDROSIS – ONE GOAL, MANY WAYS

CHAIR: HECTOR LEAL SILVA

How to Fight Unwanted Sweating? An Overview on Treatment Methods

Dirk-Harald Gröne, Germany

This lecture will serve as introduction and will give an overview over treatment methods whether pharmaceutical, cosmetically or surgical. In the author's point of view, subgroup detection of patient subgroups facilitates the process of determining the optimal method of treatment or combination of treatments for the patient.

GAERID – INTIMATE AESTHETIC SURGERY & REJUVENATION: WHY, WHEN, HOW?

CHAIR: ALLAN WU

Fractional CO_2 Laser Treatment for the Symptoms of Vulvovaginal Atrophy and Vaginal Rejuvenation in Premenopausal Women

César Arroyo and Konika Patel Schallen, Spain

Background and Objective: Vulvovaginal atrophy is a common and underreported condition that can occur at any time in a woman's life cycle. Fractional laser systems with dedicated gynecological handpieces have become available as a nonsurgical approach for treatment of dryness, irritation, soreness, and dyspareunia associated with this condition. This prospective study investigated the effects of fractional CO_2 laser in premenopausal women treated by resurfacing and coagulation of the vaginal canal tissue and mucosal tissue of the introitus.

Method: The study included 21 premenopausal women (mean age 45±7 years) treated both internally and externally up to three times with a fractional CO_2 laser system. The Vaginal Health Index (VHI) was used by the investigator to assess changes in vaginal elasticity, fluid volume, urine pH level, epithelial integrity and moisture. A subject questionnaire reported on sexual function, satisfaction and improvement at a 12-week follow-up post final treatment. A 10-mm visual analog scale was used to measure discomfort associated with treatment.

Results: Vaginal health and subject assessment of vaginal symptoms improved with successive treatments. At 12 weeks following the third treatment, 82% of the patients showed a statistically significant improvement in the VHI scale, with an average difference from baseline of 2.6±2.4 ($p<0.05$). Additionally, 81% of subjects reported an improvement in sexual gratification, 94% in vaginal rejuvenation, and 100% reported satisfaction with treatment and 94%

would recommend the procedure. Most patients (97%) reported that both internal and external treatment phases were accompanied with none to mild pain. Immediate treatment responses were mild and transient, resolving within 1-2 days and included: burning (20%), itching (20%), bruising (4%), swelling (4%), twinging sensation (4%), numbness (4%) and purpura (2%).

Conclusions: Fractional CO_2 laser treatment is associated with improvement of vaginal health and amelioration of symptoms of vulvovaginal atrophy, resulting in improved satisfaction with sexual intimacy in premenopausal women. Treatment time is quick and there is minimal discomfort associated with treatment. Investigation of clinical outcome in a postmenopausal population is warranted.

RF vs. Laser – What Is More Effective?
Dirk-Harald Gröne, Germany

In May 2016, the first international congress of the European Society of Aesthetic Gynecology (ESAG) was held in Rome, gathering world renowned experts discussing cutting edge technologies and new approaches ultimately leading to improvements in function, self-confidence and quality of live.

Parallel thereto new laser and radio frequency systems were introduced on the market; both technologies receiving FDA approval. But what is more effective technology in the treatment of female rejuvenation? This lecture will give an overlook of the state of the art use of these technologies in female rejuvenation, encompassing either symptoms of incontinence and dysparionia, prolaps, pelvic floor anatomy and vaginal relaxation syndrome.

RF for Improving Vaginal Laxity & Sexual Function
Santiago Palacios, Spain

Importance: Vaginal laxity (VAL) negatively impacts sexual function for millions of women. Low-dose cryogen-cooled monopolar radiofrequency (RF) therapy of the vaginal introitus provides an out-patient, non-surgical option for women with VAL.

Objective: To evaluate the safety and efficacy of cryogen-cooled monopolar radiofrequency for the treatment of VAL.

Design, Setting, and Participants: A prospective, longitudinal, randomized, single-blind, and sham-controlled study was carried out in nine centers in Europe and Canada. Data from one center in Spain is included in this sub-analysis. Women presenting with VAL were invited for study screening; informed consent was obtained. Major study inclusion criteria were: pre-menopausal, ≥ 1 full-term vaginal delivery, and normal genitopelvic exam.

Intervention: Enrolled subjects were randomized (2:1) to receive low-dose, cryogen-cooled RF therapy vs Sham delivered to the vaginal introitus.

Main Outcomes and Measures: Endpoints included mean change from baseline related to Sexual Distress.

Results: The six-month Sexual Distress score improved by 3.91 in the Active group (N-32) versus worsening by 0.53 in the Sham group (N=18). There were no serious adverse events associated with treatment.

Conclusions & Relevance: A single treatment of cryogen-cooled monopolar RF therapy is safe and effective for the treatment of VAL. Data from a sham-controlled study supports the use of a novel therapy for a prevalent & undertreated condition.

Multi-Polar RF for Advanced Feminine Rejuvenation
Allan Wu, USA

Introduction: The growing menopausal and postmenopausal population have distinct and unique aesthetic and rejuvenation issues, which require a different surgical skill and tool set than those of reproductive age. Often tissues are ill prepared for standard aesthetic surgical procedures and practitioners may be restricted from standard estrogen based priming therapies secondary to a history of estrogen sensitive cancer. Non hormonal minimally invasive technology such as multipolar Radio-Frequency (Fiore by Venus Concept) offers practitioners an easy method of regenerating and rejuvenating difficult and complicated cases of vaginal atrophy. Fiore RF can function as a solo or adjuvant therapy unlocking treatment capabilities and demographics previously inaccessible. The clinical science behind intimate multipolar RF technology, novel cases and surgical techniques incorporating use of this technology will be presented.

Methods: Meta analysis using cellular models were exposed to pulsed heat shock and pulsed electromagnetic fields (PEMF) and measured for Collagen I and III and MTOR gene up regulation using quantitative PCR analysis. FGF 2, 7 and 10, WNT 5 and Collagen IV, V and III, TIMP1 and vitronectin gene expression was measured at 14 and 21 days post PEMF exposure. t-tests were used to determine statistically significance.

Combined therapy of multipolar RF and PEMG were applied in the rodent model and human subjects under IRB and HSRB approved studies. Punch biopsies were obtained and analyzed with standard special staining and histomorphometry measurements. Clinical photo documentation was obtained by standard digital imaging without subsequent image manipulation.

Results: Clinical improvement in both appearance, mucosal moisturization and sexual function was noted on patient selfreported surveys. Histomorphometry revealed considerable improvement in keratinocyte organization and pluristratification. Pulsed heat shock unregulated Collagen I and III ($p < 0.01$). PEMF upregulated FGF 2, 7 and 10, WNT 5 and Collagen I, IV, V and III, TIMP1 and vitronectin gene expression ($p < 0.01$). MTOR pathway up regulation was also elicited by PEMF.

Conclusion: Both clinical end points including self-reported aesthetic improvement and biologic markers are significantly improved with RF and PEMF therapy on a tissue and cellular basis. Preliminary clinical experience with the Fiore multipolar RF and PEMF device presents clinicians with a novel method of nonsurgical minimally invasive intimate rejuvenation that is easy to use, safe and clinically effective in pre- and post-menopausal patients.

FRIDAY, SEPTEMBER 2, 2016 9.00 – 11.00h

BODY CONTOURING & REJUVENATION – FROM HEAD TO TOE
CHAIR: BARRY DIBERNARDO

Non-Surgical Treatments for Upper Arms
Diane Duncan, USA

For many years, brachioplasty has been the standard operation for women with “bat wings”, crepey lax skin, and lipodystrophy of the upper arms. Many women decline this operation because of permanent, visible, and unattractive scars. While most state they strongly desire the ability to wear sleeveless clothing without embarrassment, few have sought treatment because of the common belief that excisional surgery is disfiguring.

Clinical complaints include pendulous skin that wiggles while gesturing, wrinkles and crepey skin, especially on the anterior upper arm, and excess fat in the volar aspect. Non-surgical options for treating the upper arms range from external MFU or radiofrequency based devices to minimally invasive RF devices or laser assisted liposuction.

While “bulk heating” is often dismissed as ineffective, new scientific studies show that it actual can restructure the aging soft tissue that results in the pendulous character of the volar upper arm. MFU both reduces fat and offers focal tightening. This approach is not frequently used due to high cost and discomfort. External RF, when viewed at the SEM level, creates a new collagen scaffold for the aging subcutaneous layer over time. Minimally invasive RF, with or without simultaneous liposuction, can achieve a more definitive change. LAL can also tighten the stroma, which will improve the flaccidity and pendulosity of the upper arms.

Microneedling, especially with topical agents, can significantly improve skin quality. A new topical with a protein signaling defensin complex offers very significant improvement. Any treatment that creates holes in the skin can be used with this topical, including hybrid laser or light fractional laser treatments.

Radiofrequency assisted needling can cause a 10-15% skin surface area reduction, but seems most effective in treating the anterior upper arm for crepey laxity.

The most significant improvement for aging upper arms can be obtained with minimally invasive approaches such as RFAL or LAL. While LAL can cause a 13-17% skin surface area reduction, published studies show a 26-50% focal skin surface area reduction with RFAL. Limitations of this approach apply to those with a pendulosity index of over 5cm. The Temourian classification can be used as a guideline for treatment recommendations for the upper arms, but on occasion patients formerly recommended for brachioplasty can be successfully treated with less invasive options.

Brachioplasty: How to Achieve an Inconspicuous Scar
Pierre Nicolau, Spain

Brachioplasties bear a poor reputation mainly due to the often very unsightly scars.

But knowledge of local particularities, such as fat comparments, skin retraction, lymphatic vessels position, axillary loosening, allows for achieving pleasant results, with improved scar quality and visibility, and reduced complications.

Surgical decision and planning rely on a precise analysis of all these components. Technique is exposed step by step, starting with extensive liposuction in limited areas, maintaining a precise level of dissection , marking skin excess differently according to each zone, suturing and limited dressing.

Each condition is presented: from minimal slackening up to "bat wings" deformity and the decisional algorithm is explained. Cases do give excellent results with great pati-

ents' satisfaction, not only in massive weight loss patients, but also for purely cosmetic indications.

Enhancements of Body Sculpting
Amy Taub, USA

Non-invasive body sculpting is one of the fastest growing segments of the esthetic market. Older technologies are being upgraded, in part due to challenges from newer technology.

Cryolipolysis is being currently updated to include new handpieces that create a shorter cycle time, less suction and less discomfort. This may have been in part due to a challenge from a new laser based fat reduction modality that has a shorter cycle time for a similar amount of tissue and doesn't require suction that was just released in the US.

In addition, radial pulse therapy has been introduced to extract maximum efficiency out of each cryolipolysis cycle and has been purported to reduce post procedural side effects.

More is being understood in how to plan for treatments to optimize results and how to avoid poor candidates.

New technology to address deeply dimpled cellulite has become available in the last year. This technology aims to take an older treatment, subcision and automate it to achieve consistent results.

Body sculpting is becoming faster, less painful, and more effective as well as longer lasting with new innovations.

AESTHETIC MEDICINE – WHAT 'S BEAUTIFUL AND WHAT'S NEXT?
CHAIR: MARINA PEREDO

The Holistic Approach of the Patient in Aesthetic Dermatology: "The Seven S of Skin®" Concept
Victor Gabriel Clatici, Romania

We are living in a world that constantly changes, with one exception – everyone wants to be young and look good! Health and beauty are strongly connected, so our beauty represents the best parameter for our inner health. The skin, our largest organ, is continuously under "double fire" - one from inside and other from outside.

Our life style (sun exposure, smoking, diet, skin care etc.) and our habits (stress and sleep) are directly associated with the main features of beauty (fine lines and rythides, spots and broken vessels, enlargement of pores and laxity etc.).

The "Seven S of Skin®" Concept represents an holistic approach to evaluate patient before any kind of Energy Based Devices treatment.

The "Seven S of Skin®" Concept approach is about sun exposure, smoking, diet (sugar), skin care, sleep and stress for each patient of Aesthetic Dermatology. The last S is about time, the age of the patient and the need of time for the full effects of EBD treatments.

The concept focusses on the impact of every "S" on health and beauty, and on the outcome of the EBD treatments. Further, the "Seven S of Skin®" Concept focusses on both quick and comprehensive evaluation before any EBD interventions, and the change of life style in order to achieve or remain health and beauty.

ichKonzept: A Pathway to Gain Peoples Interest in Aesthetic Medicine
Dirk-Harald Gröne, Germany

There are many ways to generate interest in aesthetical medicine such as magazines, news reports, TV- and Radio-shows, gossip etc.

This lecture will introduce the concept of three-step beauty consulting as a way to prepare the patient for beautification and the related treatment steps. To facilitate the patient's decision to begin with the treatment, he will be provided with 3D-images illustrating the outcome of the interventions he desired.

How to Avoid Feminization of the Male Face
Ekaterina Gutop, Russia

The majority of our patients in aesthetic practice are ladies. It should be noted that quantity of male patients is constantly increasing.

When treating male patients, it is essential to avoid feminization or hypercorrection of the male face. To this end it is important to base the treatment on individual peculiarities of the person. Requests, aesthetic, anatomical, psychological, physiological and sociological characteristics of male patients should be taken into account.

The strategy of correction is the creation of a more masculine and fresh appearance.

The main method of treatment for the upper face is Botulinum toxin injections. For this kind of treatment higher doses of BoNT-A should be used and care has to be taken to avoid the lifting of the lateral part of the brows, which would create an unnatural look.

The volumizing of the lower facial contours, chin and antero-medial part of the mid face are prevalent in the strategy of the volume treatment. The HA product with high G' and high lifting and volume capacity in appropriate quantity has to be used.

To avoid feminization of the male face, the volume treatment of the lateral part of the mid face with a special accent on the "apex" point, the changing of the proportion between mid and lower part of the face, the smoothing out of the lower contours of the face, augmentation of the male lips in the feminine style should not be done.

It is vital to pay particular attention to a natural look and feeling after treatment for the male patients.

NEWS FROM 5 CONTINENTS
CHAIR: VALERIE CALLENDER

Everything Gets Smaller: Nano-Fractional RF
Wichai Hongcharu, Thailand

While radiofrequency has been used medically for decades to treat a wide variety of conditions, its use therapeutically to target conditions affecting the skin is relatively new. With the development of fractional radiofrequency, which allows for the heat energy to be delivered in a more targeted manner through the use of needles as electrodes, this technique is now the preferred medical treatment option for many skin conditions given the reduction in recovery time and fewer number of reported side effects. The current study examined the clinical effectiveness of SmartScanTM Nano-Fractional RFTM treatment.

Participants included 12 healthy female volunteers who reported varying degrees of rhytides, hyperpigmentation, or acne redness. Participants each received one treatment of SmartScanTM Nano-Fractional RFTM. The areas receiving treatment were photographed in a standardized way, using high-resolution macrophotography, at baseline (prior to receiving the treatment) and one month after treatment. Baseline and post-treatment photographs were then visually compared for treatment effects and analyzed through software-assisted quantification of variation in pigmentation and skin texture. The results indicated that this SmartScanTM technique for Nano-Fractional RFTM is effective in improving skin texture and pigmentation.

Photoacoustic Photorejuvenation in Skin Types I to VI Using a Novel Dual Wavelength Laser in Fractional and Nonfractional Modes
Vic A. Narurkar, USA

Photorejuvenation has been used using primarily photothermal modalities such as ablative laser resurfacing, fractional laser resurfacing, non-ablative photorejuvenation with intense pulsed light and lasers. While these are highly effective, the photothermal effects predominate and may lead to unwanted thermal injury, resulting in pigmentary changes and scarring. We report the use of a novel approach to photorejuvenation and have coined the name, photoacoustic rejuvenation, where the photoacoustic effects predominate over photothermal and the fractional modes of delivery are primarily dermal using LIOB (laser induced optical breakdown).

A novel dual wavelength picosecond laser with non-fractional (Picoway 532nm/1064nm) and fractional (Picoway Resolve 532nm/1064nm) was studied in 50 patients with mild to moderate photodamage of the face, neck, chest and hands in skin types I to VI. The entire surface area was treated in the fractional mode using the 1064nm wavelength followed by spot treatment of isolated pigmented lesions in the non-fractional mode using the 1064nm and/or 532nm wavelength. Assessments consisted of photography, patient satisfaction and a validated photoaging scale.

All patients reported a 1 to 2 grade improvement in fine lines, pore size, texture as well as 2 to 3 grade improvement in discrete pigmented lesions. There were no reports of hypopigmentation, hyperpigmentation or scarring.

Photoacoustic photorejuvenation offers a safer and effective modality to treat mild to moderate photodamage in all skin types. Since the photoacoustic effects of the laser predominate in both the fractionated and non-fractionated modes, the incidence of unwanted side effects is minimized.

Fractional Q-Switched Laser Treatment for Non-Ablative Skin Rejuvenation: Hystopatological Study
Fernando Urdiales Gálvez, Spain

Non-ablative fractional lasers are one of the most used technologies for skin rejuvenation in all aging skin situations.

We demonstrate in this study that the use of Neodimium–Yag 1064 Q-Switched Fractional Laser Clear Lift (Alma Lasers), with five different tips allows to choice different focal dis-

tances to penetrate in different layers of the skin. So, with a short focal distance, we could penetrate to the deep reticular dermis. For other hand, with long focal distance we can penetrate to the superficial papilary dermis.

With this new technology now is possible to choice the area of the skin that you would like to treat with different symptoms like pigmentation, fine wrinkles or elastosis as well, without pain, redness and recovery time.

FRIDAY, SEPTEMBER 2, 2016 11.30 – 13.30h

EXPANDING YOUR TOXINS KNOWLEDGE AND USES

CHAIR: CHYTRA V. ANAND

Is Botulinum Toxin Effective for Hair Treatment?

Amin M. Amer, Egypt

Botulinum toxin became a very important drug in the past decade and is used worldwide for many reasons.
This talk will cover a new indication for Botulinum toxin, which is hair falling. Hair falling is a very common complaint by females and males and needs a lot of attention.
Botulinum toxin injections give great results to stop hair falling and regrowing hair, which is very good achievement with this multifactorial disorder.

FAT REDUCTION AND TRANSFER – SURGICAL VS. NON-SURGICAL

CHAIRS: STEPHEN MULHOLLAND AND ROGER E. AMAR

Body Shaping and Volume Reduction with a Novel 1060nm Diode Laser

Maurice A. Adatto, Switzerland

The technology and supporting clinical research for a novel 1060nm non-invasive hyperthermic laser treatment for body shaping will be discussed. Historical research has demonstrated prolonged exposure of adipocytes to 42-47oC can cause injury with subsequent elimination of these damaged cells from the body in the weeks following treatment. The 1060nm wavelength offers an ideal non-invasive option with minimal melanin absorption but high affinity for adipose tissue. Proprietary energy modulation of the laser energy delivery elevates the tissue to the required temperature, sustains that temperature to allow for cellular disruption, whilst protecting the epidermis from injury.

In a split flank study, 49 subjects were treated with one flank receiving a single laser treatment and the other flank none as a control. Ultrasound measurements of fat thickness were performed at baseline, 6 and 12 weeks post treatment and high resolution photographs were taken at baseline and 12 weeks post treatment. Subjects were asked to complete a satisfaction questionnaire. The results of this study demonstrated statistically significant reductions in fat thickness comparing treated and control sides at both 6 and 12 weeks. Blinded evaluation of the photographs correctly identified the post treatment image 90.3% of the time. 93% of subjects rated they were satisfied with the outcome and the most common side effects were mild to moderate tenderness after treatment. A separate study with 35 subjects undergoing a single treatment on the abdomen and follow up at 6 and 12 weeks demonstrated similar findings. Statistically significant reductions in fat layer thickness comparing ultrasound results at 6 and 12 weeks with baseline, with blinded assessors able to identify the post treatment photograph 95% of the time. 91% of the subjects were satisfied with the treatment outcome.

The data presented demonstrates that 1060nm light based non-invasive body contouring is an efficacious modality.

The Use of Adipose SVF in Facial Rejuvenation and Repair: The FAMI Technique

Roger E. Amar, Spain

The search for long lasting symmetrical results after fat injection leads us to develop 18 years ago, a new concept in fat transfer, insertion of processed fatty tissues into the facial muscle and under the skull periosteum.

Fat Autologous Muscle Injection – (FAMI in Wikipedia) was set in 1998.

FAMI is an autologous fat transfer technique that targets multiple anatomical facial planes. The technique seeks to restore aging-related volumetric loss by injecting fat into the sub-periosteal space, the deep fat pads, and the muscles of facial expression. By placing the fat grafts specifically into the rich vascular bed of the facial muscles, graft retention is enhanced leading to greater predictability and longevity; by using the patient's anatomy as the template in photos of the patient younger, a natural-appearing rejuvenation is achieved.
The original method was published in 1999 in the French journal, "Les Annales de Chirurgie Plastique", has been improved in 2002 with the extensive use of mesenchymal cells or adult stem cells and published in Dermatology Surgery and Aesthetic Plastic Surgery Journal.

More than 100 cadaver face halves were injected with blue dye, then dissected to better understand the 3 muscular planes and to set the FAMI algorithm for a systematized pan-facial injection with specific cannulas.

Since 1997, 1026 patients were operated in aesthetic surgery under truncular block anaesthesia with sedation.

The patients of the aesthetic group (93%) were satisfied with the natural aspect of their rejuvenation. The patients of the repair group (7%) were pleased with the quality of bone and muscle restoration. We noticed for each patient an uneventful recovery and it has not been found any infection or irregularity, no touching up was performed.

In Conclusion, FAMI is a mature technique supported by hundreds of surgeons who advocate worldwide this one session systematized pan facial restoration lasting virtually indefinitely.

The Evolution of Liposuction Techniques

Stephen Mulholland, Canada

In this talk, Dr. Mulholland will review his extensive 25 year experience with energy assisted liposuction techniques. The evolution of energy based liposuction techniques will be reviewed, including ultrasound assisted liposuction, power assisted liposuction, water assisted liposuction, laser assisted liposuction and radiofrequency assisted liposuction.

Dr. Mulholland will outline the advantages and disadvantage of energy and thermal assisted Lipocontouring and Lipocoagulation and its role in modern liposuction. In addition, Dr. Mulholland will include his approach to energy assisted harvest and transplantation of fat graft and adipocyte derived stem cells.

The talk will include the most current approaches to simultaneous liposuction and Lipocoagulation and the tightening of skin during liposuction procedures. The most up to date technology parameters and technologies will be reviewed including radiofrequency assisted liposuction contouring (RFAL BodyTite) and ThermiRF) as well as laser assisted liposuction (SmartLipo). Dr. Mulholland will review his results, risks and complications of thermal based liposuction.

Cryolipolysis: 5 Year Experience with Different Devices and Effective Adjuvant Treatments

Markus Steinert, Germany

With rising demand of patients for fat reduction, a broad treatment spectrum of non-invasive body shaping procedures is offered to meet well-being and attractiveness.

High claims on aesthetic body shaping require qualitative sophisticated methods to enhance effective results in fat reduction. Adequate body shaping techniques require tools to enable experienced professionals to make gentle and subtle transitions to the parts of the body that have not undergone treatment yet.
With the increased risk of complications from more invasive procedures such as liposuction, Cryolipolysis is offering a promising method for nonsurgical fat reduction and body contouring. Cryolipolysis has emerged as a gentle, effective and safe non-invasive body contouring method using controlled cooling to selectively destroy fat cells.

Five year experiences with different devices and effective adjuvant treatments show the benefits of this efficacious method: optimal use of this smooth medical-aesthetical body shaping procedure allows the removal of fatty deposits with high effectiveness in the lower and upper abdomen, inner and outer thighs, flank area, and back. Continuous innovative development enables further improvement of this almost painlessly technology to fulfil the high expectations to the future body shape.

SKIN CANCER – CUTTING-EDGE TREATMENT OPTIONS

CHAIR: MERETE HAEDERSDAL AND JOEL COHEN

A Non-Invasive Method for Early Melanoma Detection

Klaus Fritz, Germany

Visual examination, with or without dermoscopy, is normally sufficient when identifying most types of lesions. However, when it comes to atypical lesions, a clinical diagnosis based on only a visual examination may pose a challenge, leading to unnecessary excisions or – even worse – missed melanomas. In such cases Nevisense provides additional and unique information from an objective analysis – a new way to increase accuracy in melanoma detection.

Nevisense is the world's first objective diagnostic support tool for non-visual detection of malignant melanoma. By gathering and analyzing precise electrical measurements in the epidermis and dermis, it provides reliable information unavailable through any other method. Through one simple procedure, it allows you to objectively evaluate suspicious lesions prior to excision.

In summary from clinical studies and experience, Nevisense has been shown to be an accurate and safe diagnostic support tool, to be used in patients with suspicion of melanoma.

Laser for Treatment of Skin Cancer
Keyvan Nouri, USA

Introduction: Skin cancer is the most common cancer affecting humans and its incidence is on the rise. Rogers et al (2010) reported that the current estimate of incidence of non-melanoma skin cancer (NMSC) in the US is ~3.5 million cases a year affecting ~200 million people.1 This equates to ~ 4 million office visits per year for NMSCs. With such a significant burden of disease, cost-effective therapeutic options that offer patients a high cure rate with minimal down time and risk of side effects, as well as a favorable cosmetic outcome are always being sought. Lasers have recently found applications in the treatment of skin cancer. Basal cell carcinomas (BCC) in particular are characterized by a capillary-like vasculature that supports and maintains tumor growth and progression. Lasers that specifically target these superficial telangiectasia are thought to decrease tumor burden or eliminate the tumor altogether with minimal damage to surrounding tissue. Lasers may be particularly effective for patients who cannot tolerate the inflammatory side effects of topical agents, those who are poor candidates for surgery, and those with multiple cancerous lesions.

Objectives: This lecture will discuss the current evidence for the use of various lasers and light systems for the treatment of non-melanoma skin cancers. It will end with a discussion of possible future laser-assisted therapies.

Conclusion: Lasers have been shown to be a safe and efficacious option for the treatment of skin cancers in certain clinical settings. However, more research is needed to confirm these observations, and to optimize the treatment parameters.

ESLD – LASER & EBD ADVANCED FOSTERING COURSE
CHAIRS: ASHRAF BADAWI, PETER BJERRING AND HANS-JOACHIM LAUBACH

Rejuvenation Updates
Peter Bjerring, Denmark

Non-invasive skin rejuvenation with optical methods have become extremely popular because their benefits outweigh their risks. Skin rejuvenation with intense pulsed light and Nd:YAG laser cover almost the entire spectrum of cosmetic dermatology, such as treatment of telangiectasias and pigmentation irregularities, fine wrinkles and skin texture, and scars and large pores.

The optical treatment can be enhanced by use of a topical photosensitizer (5-aminolevolinic acid) and it can be combined with a chemical peel performed in the same session to produce a more pigment selective treatment.

The potential side effects of treatment, such as swelling, redness, and facial flushing, are minor and usually disappear within a few hours or days of the procedure.

HIFU vs. RF vs. FRM – Outcome and Side Effects: Which Technology When
Klaus Fritz, Germany and Carmen Salavastru, Romania

Introduction: High-intensity focused ultrasound (HIFU) and radiofrequency (RF) are used for non-invasive skin tightening. HIFU shows the highest level of neocollagenesis and neoelastogenesis in the deep reticular dermis. The goal of a body and face contouring treatment including is to achieve tightening of the skin and superficial fat reduction.

Method: We treated 10 patients, using a combination of microneedle delivered bipolar Radiofrequency for superficial and medium deep layers in combination with HIFU of 3mm penetration depth and a fluence of 1 – 3 Joules for the tightening of SMAS and deeper layers, using a device that allows FRM, RF and HIFU applicators.

Left upper cheek was treated with both technologies, the right one with HIFU only and the both lower cheeks were treated with FRM only in 10 healthy women aged 32 to 67 doing 2 passes each in 3 sessions 1 month apart. Subjects completed 60- or 120-day follow-up visits or both.

Results: Results data were obtained at 90 and 180 days using a physician Global Aesthetic Improvement Scale (GAIS) score. GAIS scores demonstrated that 80.2% of the patients achieved improvement at 60 days post treatment and 72.4% patients at 120 days. After the combination treatment, 71.7% of the patients achieved improvement at 60 days post treatment and 72.1% of the patients at 120 days. With HIFU only 68.5% of the patients achieved improvement at 60 days post treatment and 62.7% of the patients at 120 days. With FRM only all subjects showed subjective improvement in appearance without any association to Fitzpatrick skin type.

Conclusion: Microneedle RF can smoothen ageing skin and scars and tighten superficial layers, HIFU is more effective in deeper layers. Monopolar RF is suitable for superficial tightening treatments like perirobital, neck, lip and cheek. All technologies can be used as a single technology or in combinations.

Laser Treatment for Scars
Keyvan Nouri, USA

The use of lasers for the treatment of various conditions in dermatology as well as medicine as a whole is centered around the theory of selective photothermolysis which utilizes the concept that the emitted wavelength of light by the laser or light system should match the absorption peak of the targeted molecule or chromophore relative to other optically absorbing molecules. In dermatology, lasers are commonly used now for the treatment of vascular and pigmented lesions, scars, and hair removal. This lecture will be focusing on laser treatment for scars.

We have done multiple studies using the pulsed dye laser for the treatment of surgical scars, starting on suture removal day. In conclusion, results showed significant improvement compared to control. The use of fractional and ablative lasers used for scar revision will also be covered during this lecture.

Update on Home-Use Devices
Godfrey Town, United Kingdom

An informal political agreement has been reached by the European Commission (EC) on new Medical Device Regulations (MDR) which captures infra-red, visible light and UV devices including coherent and non-coherent sources such as lasers and intense pulsed light equipment intended for use on the human body. It is expected that the new MDR will be finalised in September 2016 with a 3-year implementation period.

Manufacturers of home-use devices will have to comply with the new regulation i.e. comply with relevant standards, implement a quality management system, a post-market surveillance system, system risk management and reporting of incidents / in-field remedial action. This means compliance with medical device standards rather than any other classification (toys, appliances, etc.). Companies like Philips, Braun, CyDen, etc., are already doing this.

Individual countries will have to decide whether to implement any national regulatory changes as the regulation will not be harmonised. The MHRA will not be interested in regulating home-use cosmetic devices in UK.

In response to EC Mandate 531 on consumer laser products a proposed new standard for the safety of consumer laser products has been prepared by IEC Technical Committee TC76 IEC 60825-1.1.

Professional laser and pulsed light devices sold for cosmetic skin resurfacing, tattoo removal and other skin treatments will no longer be able to rely on testing to electrical appliance safety standards only.

As a consequence of the proposed new MDR and new safety standard for consumer laser products, some international standards will require revision.

Laser Assisted Hair Transplantation (Micro Follicular Unit Transplantation) Laser Assisted Follicular Unit Transplantation (LAFUT)
Ahmed A. Youssef, Egypt

Introduction: Secondary Cicatricial Alopecia (SCA) cases are known for being difficult to treat. It has been estimated that the percentage of acceptance of transplanted hairs is reduced in scarred tissue by less than 50% (compared with >90% growth rate in normal non Cicatricial tissue) (Epstein et al, 2003). This is due to limited vascular supply in areas of Cicatricial alopecia, which affects graft viability. In addition to graft failure, sclerotic tissue also increases the risks of infection, ischemia, hypoxia, and necrosis due to the inadequate vasculature (Rose et al, 2004). Fractional carbon dioxide laser resurfacing (FxCR) has a remarkable effect on scar remodeling and revitalization of tissue. We hypothesized that our LASER Assisted Follicular Unit Transplantation (LAFUT) technique would increase the number of viable grafts in cases of SCA.

Materials & Methods: Eighteen patients diagnosed with SCA after previous surgeries &/or trauma were treated by FxCR using variable parameters to allow deep fractional ablation for 2-3 sessions; 1-2 session within one month before the date of surgery for induction of revascularization and last session on the same day of surgery immediately before the implantation step to determine the density plan and prepare holes for follicular units' insertion in the recipient area. Trichoscopy Evaluation for hair density was done immediately after implantation, 10 days after surgery and 9 months after surgery. Photographic evaluation was made for comparison of pictures before and after 9 months.

Results: Significant improvement for all cases with signs of revitalization (e.g. Elasticity, Colour, Texture) as well as rapid hair regrowth with more than 90% graft regrowth.

Discussion: Compared to previous studies, our results showed both higher density of hair implantation in SCA recipient areas and higher graft regrowth on using deep fractional ablative.

Conclusion: LAFUT is a new promising technique for optimizing results of Hair Transplantation in cases of SCA. Further studies should be done for providing histopathological evidence of improvement in LASER treated areas compared to untreated areas after Hair Transplantation.

FRIDAY, SEPTEMBER 2, 2016 14.30 – 16.30h

SKIN CONDITIONS – AT A GLANCE
CHAIR: ANDY GOREN

Novel Topical Cream Delivers Safe and Effective Sunlight Therapy for Vitiligo by Filtering Damaging UV Radiation
Andy Goren, USA

NB-UVB phototherapy is the gold standard in the treatment of vitiligo and psoriasis. The efficacy of NB-UVB artificial light sources have been demonstrated in large scale studies; however, the safety, access, and patience compliance remain poor.

Recent advances in novel chemical compositions present an opportunity to transform NB-UVB phototherapy by providing increased safety and accessibility utilizing the sun as a power source. This lecture will review the limitations of current NB-UVB light therapy and the development of a safe and effective sunlight therapy for vitiligo.

THE WORLD OF MICRONEEDLING & RF
CHAIR: MARTIN KASSIR

High-Intensity Focused RF: an Elegant Approach to all Aspects of Skin Rejuvenation
Maurice A. Adatto, Switzerland

Radiofrequency (RF) systems represent a well-established modality for skin rejuvenation. External application of monopolar or bipolar hand pieces, however, have problems achieving adequate coagulation damage in the deeper dermis, and require aggressive skin cooling to protect the epidermis from electrothermal damage.

The elegant approach of using matrices of insulated microneedle bipolar electrodes, with only the first few hundred micrometres of the needle tip left uninsulated, focuses the fractionated RF energy where it is required, delivering high-intensity focused RF (HiFR) to the dermis. The added ability to preselect the needle depth for each pass during a session, coupled with a wide range of intensity and exposure time settings, means the user can create patterns of discrete coagulation with controlled damage volume at varying depths in the dermis. Because this is a fractional approach, the coagulated zones are surrounded by normal uninjured dermal tissue to speed up the wound healing process. The lack of electrothermal damage at the epidermis limits the effect to mechanical microneedling, which is in itself beneficial to epidermal regeneration, and helps to minimize patient downtime.

Compared with the fractional CO_2 laser, which produces a "top down" microablative zone surrounded by residual thermal damage from the epidermis down to the target depth, HiFR delivers damage only at the target depth. That makes HiFR ideal for deeper scar revision for both hypertrophic and atrophic scars, tightening of lax tissue on and off the face, an ideal intervention for treating the photoaged neck, and for removal of lines and wrinkles with good neocollagenesis and elastinogenesis, followed by enhanced remodelling, to restore the youthful face.

HiFR is indeed an elegant approach for all aspects of skin rejuvenation, bridging the gap between the more aggressive approach of fractional ablative laser resurfacing and the previous generation of external RF systems.

High Intensity Focused Radiofrequency for Jowl and Neck Laxit
R.-Glen Calderhead, South Korea

Skin laxity at the jowls, neck and jawline has proved to be most challenging to treat consistently and effectively with current minimally-invasive modalities, Ultrasound and fractional laser devices have mixed results in these anatomical areas, but high intensity fractionated RF (HiFR) delivered with insulate microneedles offers a new paradigm for successful tightening of the neck and jaw.

In the HiFR approach, only the tip of the needle is the active electrode, and no electrothermal damage is delivered to the epidermis thus obviating the need for cooling. The high-intensity RF energy is thus focused at the needle tips, from which the term HiFR is derived. A matrix of a number of needles, comprising delivery and return electrodes, is mounted in a single use disposable tip, and is automatically inserted and retracted by the hand piece. Ideally, the needles can be inserted to depths preset by the user, with a large range of power and exposure time settings to allow delivery of precise volumes of electrothermal damage. With the delivery of multiple passes at decreasing depths in the dermis, a series of layers of controlled coagulation is created, sandwiched between normal uninjured dermal matrix to accelerate the healing process. Skin shrinkage is induced, which is replaced by three-dimensional tightening during the proliferative and remodelling phases of wound healing.

Results with HiFR have been significant, as will be illustrated, with minimal downtime and no persistent sequelae. HiFR is a new paradigm for safe and effective treatment of neck and jowl laxity.

Cutting Edge: New Uses for Radio Frequency Devices
Jeanine B. Downie, USA

ThermiTight is the first aesthetic technology that uses thermistor-regulated radio frequency energy to achieve the desired cosmetic results. The ThermiRF system uses a tiny treatment probe that is the size of a pen point to gently heat specific tissues to a predetermined therapeutic temperature. This type of energy stimulates collagen production and encourages improved results after treatment is completed.

ThermiTight technology is used to tighten jawlines, decrease wrinkles, decrease cellulite, tighten arms, abdomens and knees. Minimally invasive, some downtime. The ThermiSmooth technology is used to heat the skin 40-42˚C to target and tighten areas around the forehead, eyes, mouth, checks and neck. This procedure is non-invasive with no downtime.

We will show pictures and video and discuss the risks, benefits and outcomes of this very popular cosmetic procedure.

In summary, because ThermiTight is minimally or micro-invasive with only local tumescent anesthesia, the patients have a fast recovery with long-lasting results. (ThermiRF, 2015).

How Much Can Microneedling Accomplish?
Diane Duncan, USA

As a surgeon, skeptical about the validity of what I considered a spa level procedure, I originally discounted microneedling. Surprisingly, this minor procedure can achieve more than a temporary improvement in skin texture, tone, striae, and apparent skin laxity. Based on the physiology of wound healing, the application of topical agents can be introduced into the dermis. While PRP has been a popular topical in the past, there is little scientific evidence that there is any long term benefit with this topical.

Microneedling alone can improve skin surface texture, tone, and striae. Topical bone marrow derived stem cell culture, plus or minus hyaluronic acid, can definitively improve the appearance of striae. New areas of research include topicals for hair growth and quiescent stem cell stimulation for structural change of the dermis.

Advances in device design include a set of broader heads that enable the operator to have a much faster treatment time than with the original dermal pen type device. FDA concern over the possibility of cross contamination due to faulty micropen design has been alleviated with a removable disposable tip, with no possibility of blood or fluids entering the pen.

Improvements in technique have drastically reduced the down time with this procedure. The traditional technique of dragging the micropen across the skin surface, leaving a "cat scratch" type of appearance, have been replaced with a tapping technique, which leaves slight erythema but not visible wounds after 24 hours.

Histology shows the improvement in epidermal hydration with HA and defensin based topicals. Neovascualrization and increased intradermal collagen formation are noted with simple microneedling, as well as with topical based treatments.

This apparently simple and cost effective device can only treat the epidermis and superficial dermis, but it can achieve definite results for a variety of clinical indications.

RF and Combination Protocols for Better Results
Klaus Fritz, Germany and Carmen Salavastru, Romania

Due to its high efficiency and safety various technologies of heating, biological tissue are broadly practiced in the dermatological field for various aesthetic applications, including skin tightening, skin lifting, body contouring and cellulite reduction. In treatments for rejuvenation and , the tissue radiofrequency and ultrasound play an increasing role in heating the dermis and ablating the epidermis with less downtime.

The objective is to compare available RF and ultrasound technologies from uni – to bi or multipolar delivered ways and the combination technologies and to provide clinical studies with the use of a bipolar RF-system and a monopolar RF system in body contouring, that utilizes a patented RF-energy technique with or without combinations.

Both – ultrasound and RF are used as a single technology or in combinations in order to achieve sufficient heating of the dermis. Based on the simultaneous delivery of monopolar RF and ultrasound energy through a single hand piece the Excilis (BTL) reduces fat cells. The applicator tip is continuously cooled throughout the treatment to protect the skin and permits effective heating of the subdermal fat layers. Re-shaping and volume reduction are achieved through targeted energy absorption and subsequent initiation of lipolytic processes and collagen remodeling.

Among its safety features are a Dermal Temperature Control (DTC) system and an Energy Flow Control (EFC) system. The procedure is considered painless and no consumables are required. Similar systems like from Cutera are available. Since 2 years a new system was launched by BTL using a whole abdomen Radiofrequency for circumference reduction (Vanquish) and in 2015 applicators for the treatment

of thighs was proven to be effective. A reduction of circumference on abdomen of 4,5 cm in average after 3 sessions 1 months apart and 1-2 cm of thighs can be achieved. A significant body – reshaping effect was observed on all responding cases.

An objective improvement was in correlation with the patient satisfaction rate. The results of this pilot evaluation indicate that the device is safe and efficacious for non-invasive body contouring and circumferential reduction, patients tolerate nicely the treatment sessions. Shock wave treatments using the X wave by BTL immediately after Vanquish or Excilis and weekly for 3 more weeks results in twice the rate of fat absorption. These new technologies allow better tightening than lasers and have enlarged the portfolio of available procedures in aesthetic medicine.

COMBINATION THERAPIES – BETTER TOGETHER

CHAIR: ANTONIO CAMPO

Eyebrow Lifts Combining Sutures, Fillers and Toxin

Beatriz Beltran, Spain

According to recent statistics from ASAPS US the number of surgical lifts was 125.000, while the number of non-surgical procedures was more than 8 and a half million. This means a lot of patients don't want surgical procedures and often surgery doesn't live up to their expectations.

Eyebrow lifts are a technique that is very in demand. I would like to explain to you my technique. It is one of the best alternatives to surgery. It is effective, non-invasive and has long lasting results. It is a treatment that permits a patient to continue with their normal life after visiting to the clinic. It is based on combining several treatments at the same time; the reason for this is because the eyebrow ptosis is multifactorial. I combine different densities of fillers on strategic points mixing cannulas and needles and I use toxin and sutures to lift the soft tissue.

I will explain to you how and where to inject and which products you have to use to achieve an excellent and long lasting result without downtime.

Beauty and Youth: Holistic Approach for the Young

Ekaterina Gutop, Russia

A holistic approach helps us to accomplish, in a convenient way, the creation of integrated treatment protocols for the patient. The best examples of beauty are to be found in the faces of the young.

The main goals of the treatment for young patients are harmonisation of the face, correction of the individual anatomical characteristics and prevention of the aging processes.

Those who seek treatment in their 20s-30s are the ones who likely to continue with correction for the rest of their life. In order to accentuate the individual beauty of the face and prevent the aging processes appropriate quantities and doses of the products should be used with careful insertion.

Combination Therapy for Lips Correction in Post-Menopausal Female Patients

Irina Kapshuchenko, Ukraine

Background: A lot of our patients that have been done cosmetic procedures during the last 20 years have entered the menopause and post-menopause period and nobody knows exactly what to do with them. We want to propose an algorithm for estimation and correction this zone, because lips are the most sensitive to hormonal aging.

Every woman experiences 3 stages of hormonal reorganization of organism called: pre-menopause, menopause, and post-menopause period. All the tissues of female organism undergo certain changes: Bones develop osteoporosis, muscles – atony, mucous membrane – atrophy, skin can demonstrate numerous aesthetic and dermatological problems like wrinkles, loss of elasticity, dryness etc.

Let us suggest taking a close look at how hypoestrogenism influences women's lips mucous membrane during menopause and post-menopause periods. Lips are divided into two parts: mucous membrane (internally) and skin (externally). Vermillion is a transition zone between skin and mucous membrane. The submucous layer in the vermilion border is absent. A big number of tiny salivary glands are located on the border between muscular layer and mucous membrane. Vermilion border is covered with multiplayer squamous keratinized epithelium while the buccal vestibule side is covered with squamous non-keratinized epithelium. Vermillion mucous border and mouth changes are the first clinical signs of climax.

Starting from pre-menopause and then in menopause and post-menopause periods with the declining estrogen level, some degenerative changes of epithelium and connective tissue interlayer take place (high hyperkeratinization). It is accompanied by decreased function of salivary glands (hyposalivation).

Materials and methods: Doctors normally recommend hyaluronic acid injections (fillers). Such treatment method works well for small wrinkles and increases the lost volume of lips. However, such complaints as dryness, flaking and even rhagades (skin fissures) increase and at this stage, patients start to realize the failure of extra high expectations. Because no treatment of mucous membrane is done, when it becomes sensitive to hormonal imbalance.

We have treated a group of 30 women at the age from 50 to 60 years old. All of them were menopause or post-menopause. Due to our IMPACT© Concept (Integral Menopausal Patient Anti-Aging Cosmetic Treatment Concept) we have recommended the following algorithm of treatment the female lips mucous membrane during menopause:

1. Consulting by endocrinologist – HRT, as an example estriol group drugsthat can influence the condition all mucous layers.
2. Topical injections of non-stabilized hyaluronic acid (Juvederm Hydrate in our investigation) into the vermillion and perioral area. From 3 to 5 treatments with 1 month interval, depends on the skin and mucosa dryness and the result, achieved one month after the procedure.
3. PRP therapy. Papules injection into the mucous of mouth, lips and perioral skin area.
4. Skin application with Phytoestrogens
5. Filler's correction should be used after the treatment course - (Juvederm Smile in our investigation)

Results: After the recommended complex treatment was done the signs of dryness on the oral mucosa and perioral area goes down, quality of the skin, vermilion border achieve much better quality level. All patients were asked their opinions and the results analyzed according to the Global Aesthetic Improvement Scale (GAIS). The results as analyzed by the patients were: 1=50%; 2=45%; 3=5%; 4=0%; 5=0%.

Conclusion: As a result of the performed therapy, all the patients have admitted that any complaints about dryness, flaking, burning disappear and also that lips appearance completely meet their expectations.

Advanced Botulinum Toxin and Fillers for Antiaging Treatment and for Facial Harmony

Claudia Magalhaes, Brazil

In the last two decades of the 20th century, the Botulinum Toxin and many types of fillers have been used to improve facial aesthetics in order to achieve a youthful appearance of the face. Many of these products available around the world are very safe - when applied with adequate techniques - and some of them are approved by the United States Food and Drugs Administration (FDA). Since the beginning of the 21st century the Botulinum Toxin and many other types of fillers have been applied with a 3D perspective of the face.

As a result of this 3D vision we realized we should no longer analyze only a specific wrinkle or dynamic lines. When taking the whole face into account, we can usually achieve better results with a facial flaccidity and contour improvement. These procedures could even have a considerable effect on the neck. Furthermore, with the development of more advanced injection points it is possible to treat young and old patients. Therefore, we have been injecting the Botulinum Toxin and fillers in some strategical points of their faces.

As an outcome of this practice, it has been clearly perceived an improvement of the facial harmony, when taking into consideration the reduction of the flaccidity as well as beautification of the facial structure, highlighting a more natural appearance.

The Synergy of the Combined Ablative and Non-Ablative Fractional Laser on Asians

Woraphong Manuskiatti, Thailand

Fractional laser resurfacing technique, based on the principle of fractional photothermolysis (FP) has been developed to address the drawbacks of full-field ablative laser resurfacing, with its significant adverse effects, and nonablative dermal remodeling, with its limited efficacy.

Nonablative fractional resurfacing (NAFR) systems were available first. Although the NAFR system has a patient-friendly benefit and less postoperative downtime, the outcomes of most NAFR lasers may not be as efficacious as those of ablative fractional resurfacing (AFR) systems in the treatment of photodamaged skin, rhytides, and atrophic scars. However, AFR is associated with a high incidence of postinflammatory hyperpigmentation (PIH) in patients with dark skin types. A combined fractional ablative and nonablative laser system has recently introduced in order to achieve a better outcome with lower risk of adverse effects, compared with existing fractional laser technologies. To sought treatment efficacy and side effect of a combined fractional 2940-nm Erbium:YAG and 1470-nm lasers in dark-skinned subjects.

We investigated the efficacy and adverse effect of a combined ablative and nonablative laser resurfacing device in a series of ten subjects with skin phototypes IV and V. All subjects received four treatments with one-month interval. Follow up evaluation was performed 1 and 3 months after the last treatment session by two masked investigator and consisted of assessment of dyspigmentation, texture, rhytides, and atrophic scars on a standardized 5 point scale;

global aesthetic improvement (GAIS) 5 point scale; and investigator and subject satisfaction questionnaire. Adverse events and treatment discomfort was also assessed.

At the 3 month follow up, 40% and 50% of the subjects were graded as "improved" or "much improved" on the GAIS by investigators. Patients' satisfaction grading corresponded to investigators' assessment. Mild PIH was the most common adverse effect observed in 20% of the subjects, and was completely resolved in an average of 4 weeks. Combined fractional ablative and nonablative laser resurfacing is effective and well tolerated for the treatment of dyspigmentation, texture, rhytides, and atrophic scars in Asians.

FRIDAY,
SEPTEMBER 2, 2016
17.00 – 18.00h

GSAAM – ANTI-AGING INTENSIVE COURSE
CHAIR: THOMAS M. PLATZER

Sculpt Visuable Beauty From Inside Out Under the Aspects of Chronobiology and Nutritional Medicine
Thomas M. Platzer, Germany

Nutrition plays an important role in health, anti-aging, beauty and esthetics. Although sometimes supplementations can be important and useful, a deliberately considered choice of food cannot be replaced by them especially in the prime of life. The intestinal absorption of vitamins, micronutrients, trace elements and many more can be enhanced by a good combination of these in a perfect meal.

„Chronobiology and nutrition" is a rather new field in sciences. Its focus is set, among others, on understanding the orchestration of and the influence on endocrinological processes within circadian and longer oscillating chronobiological rhythms. E.g. the same meal eaten at night time results in higher weight gain than eaten at daylight.

Following this ratio, influences are known for macro- and micro nutrients, the timing of their consumption and also their composition one with another, and how they interact with Clock-genes, the BMAL 1-system as activators vs. the PER/Cryos system as repressors on promotor genes. These interactions have an effect on the production of stress hormons as well as gender hormons, both of which also contribute to a healthy, shiny appearance with good moods, sound skin and strong hairs.

Bottom line: Hormones and the endocrinological metabolism influence our health in general, but also the sound state of our skin and our appearance. The likeliness that hormones are being expressed in their respective glands follows also circadian chronobiological rhythms that are being influenced from triggering external and internal stimulations. One of these stimulators is nutrition by the means of composition regarding macro- and micro nutrients, trace elements, vitamins. Timing and specific composition of our meals thus have a strong impact on our intrinsic health.

This workshop will highlight why it is necessary to follow certain meal patterns, show what timing is the best, scientifically explain why, and draw attentiveness to the right choice of food necessary for health in the modern world of convenience food and western diet in which we lack valuable micro nutrients as indispensable components for good anti-aging and skin.

IPS – CHEMICAL PEELS: STATE OF THE ART
CHAIR: SAHAR GHANNAM

Comparative Study of Effects of Comedo Extraction Using a Modified Technique in Acne Vulgaris Patients Managed with Glycolic Acid Chemical Peel
Eman M. Sanad, Sherin H. Abdel-Rahman, and Eman Abdel-Zaher, Egypt

Introduction: Comedonal acne is often slow to respond to topical and oral acne therapies. Mechanical removal of open or closed using comedonal extractor is a matter of controversy in the treatment of acne.

The aim of this work was to evaluate the efficacy of comedo extraction using a modified technique in various types of Acne vulgaris managed with GA chemical peel.

Patients and Methods: The study was carried out on 30 patients suffering from acne vulgaris whether inflammatory or non-inflammatory. They were subjected to facial GA chemical peel every two weeks at gradually increasing concentrations (20%, 30%, 35%, 50% and 70%) according to patients' tolerance for a maximum of sixteen weeks. Comedo extraction for the right (Rt) side of the face was done for all patients in every session using our modified technique: Gentle downward and medial pressure at 45˚ angle by comedo extractor on the margin of the black or white comedones. Pustules and white closed comedones were decapped first using 21G needle to help expressing the contents in toto.

Results: The majority of the enrolled patients in this study were of grade II acne vulgaris. There was a significant reduction in acne severity index (ASI) at both sides of the face. By comparing the Rt. and Lt. sides, the Rt. side (+comedo extraction) showed better and earlier improvement than the Lt. side with statistically significant difference ($p < 0.05$) with significant reduction in the mean number of total lesion count (TLC).

All patients were satisfied with the results and have well tolerated the modified technique of comedonal extraction. The most frequent side effects were discomfort and mild to moderate pain. No recorded cases with scar formation denoting the safety and tolerability of application of both glycolic acid and comedo extractor.

Conclusion: Using our modified technique of comedo extraction is safe, effective and faster results can be obtained.

FRIDAY,
SEPTEMBER 2, 2016
14.30 – 16.30h

FREE COMMUNICATION: ABSTRACT AWARD
CHAIR: CHRISTINE DIERICKX AND MAURICE ADATTO

Is Platelet-Rich Plasma (PRP) Treatment Effective for Hair Loss Due to Androgenic Alopecia?
Kenan Aydogan, Turkey

Background: Androgenetic alopecia (AGA), a hereditary and androgen-dependent progressive follicular miniaturization of the scalp hair in a defined pattern, is a common dermatological disorder affecting more in men and occasionally in women. Platelet-rich plasma (PRP) has emerged as a new innovative treatment modality in regenerative dermatology, and preliminary evidence suggests that it might have a beneficial role in hair regrowth and restoration. Platelet-rich plasma, promotes angiogenesis in the tissue by action of growth factors, which stimulate the hair follicle.

Objective: To evaluate the efficacy and safety and efficacy of monotherapy autologous PRP injections in the treatment of AGA.

Material and Methods: Twenty-six patients suffering from hair loss due to AA (including male -8, 18 - women aged 19 to 69 years, average age – 39.73 ± 11.85 years) and not responding to 6 months treatment with minoxidil and other agents were included in this study. Duration of disease, on the average is 4 years. The PRP was prepared using the kit certified as medical device Class IIB. Monotherapy was carried out by intradermal injection of platelet rich plasma at intervals of 3-4 weeks. A total volume of 4 to 5 cc (per session) PRP was injected in the scalp by using an insulin syringe. The number of procedures is 2 to10, on the average – 3.9 ± 2.9. Evaluation of the results was made by macroscopic photos and patient's overall satisfaction.

Results: As a result of platelet-rich plasma therapy, there is a positive trend established as the form of hair loss reduction and enhancing their growth. Patients receiving more than 3-4 treatments achieved the significant effects (such as clinical improvement in the hair counts, hair thickness, hair root strength, and overall alopecia). During and after treatment the side effects for a year have not been noted.

Conclusions: Based on the literature review and the results of the present study, intra-perifollicular injections of autologous PRP generates improvement in hair thickness and density in AA patients. The beneficial effects of PRP in AGA can thus be attributed to various platelet-derived growth factors causing improvement in the function of hair follicle and promotion of hair growth. PRP appears to be a simple, cheap, effective, non-allergic safe and promising therapy for AGA with high overall patient satisfaction. Currently there is evidence to support its potential efficacy, however further investigation is required. New research will hopefully provide the data required to evaluate protocols for activation, additional beneficial components, and the minimum required frequency of treatments for effective results.

A New Approach for Gynoid Dystrophy Treatment Based on a Hyaluronan-Conjugated Gold Nanoparticles Cosmetic Product
Gabriel Buendía, Spain

Introduction: Gynoid dystrophy is one of the most common aesthetic issues among women. Cosmetics and non-invasive energy-based methods aim to solve the issue acting over the adipose tissue and have met mixed-to-poor results. A new approach based on reinforcing the mechanical properties of the dermis with a cosmetic product with hyaluronan-conjugated gold nanoparticles has obtained rather favorable results.

Materials & Methods: Twenty-four subjects aged from 32 to 52 presenting cellulite grade 1 to 2 (Müller Scale) were selected for a randomized, double-blind, placebo-controlled 28 days long efficacy study. The placebo contained the same hyaluran (which is an already commercially available active) that is used the product but without the gold nanoparticles, thus acting as negative control. Weight and thigh

circumference were measured at every visit in order to ensure that no dieting or additional exercising took place. 3D Fringe projection measurements were taken in order to assess dimples, nodules and skin texture evolution. 50 MHz High Frequency Ultrasounds were used to evaluate epidermal and dermal thickness and echogenic density. Biopsies were performed in order to evaluate any histological changes. Standarized photographs were taken at every visit.

Results: Weight and thigh circumference remained the same throughout the study. All major 3D parameters (dimples volume, circumference, area; roughness) presented a considerable and statistically significant improvement exclusively on the gold nanoparticles-treated leg (dimples volume was reduced an average of 30%). Dermal and epidermal thickness experienced a similar evolution on both legs. Echogenic density of the dermis increased in average 21% in the placebo treated thighs and 50% in the products. This difference was statistically significant. Histology showed the differential collagen and hyaluronan synthesis suggested by the other tests.

Conclusions: Hyaluronan-conjugated gold nanoparticles induce a potent extracellular matrix synthesis of the dermis, thus increasing its mechanical properties. This new approach has proven its efficacy in significantly improving the gynoid dystrophy.

High-Intensity Focused Ultrasound with Surface Cooling Non-Invasive Abdominal Subcutaneous Adipose Tissue Reduction

Esther Carmona Hernández and Héctor Leal Silva, Mexico

Background: High-intensity focused ultrasound (HIFU) quickly raises local temperature of subcutaneous adipose tissue, resulting in instantaneous cell death within the targeted area; higher temperatures can be safely applied using contact cooling.

Objective: Evaluate safety and performance efficacy of HIFU with surface cooling for Non-Invasive reduction of the subcutaneous adipose tissue (SAT) in the abdomen.

Methods: A new HIFU device (LIPOcel™, Jeisys Medical, Inc. Seoul, Republic of Korea) with contact cooling was used to reduce abdominal circumference adipose tissue in 3 treatment modalities.

Result: 30 subjects, mean age of 35.4 years underwent one or 2 HIFU treatments. Mean total energy dose was 509.4 J/cm2, 495 J/cm2, and 374 J/cm2 for Groups A, B, and C respectively; whole study mean total fluence was 459.47 J/cm2. Mean waist circumference reduction was 2.95 cm, 2.4 cm, and 3.8 cm for Groups A, B, and C respectively. A significant mean waist circumference reduction of 3.05 cm from baseline was observed. Most subjects (63.3%) reported being satisfied or very satisfied with the results; 80% of the investigators reported satisfactory results.

Conclusions: HIFU with surface cooling using high fluence, assessed by standardized waist circumference measurement, is safe and effective for abdominal SAT reduction and noninvasive body sculpting.

A New Closed System to Mix Fat Nanograft and Micrograft With PRP for the Correction of Facial Wrinkles and Age Related Face Volume Loss

Alessandro Di Petrillo, Mario Goisis, L. Rosset, S. Mele , Italy

Objective: To report the efficacy of a new technique for fat nanograft and micrograft, harvested by means of a new conception cannula and mixed in a closed system with PRP for the correction of wrinkles on frontal area, nasolabial and lacrimal sulcus and the correction of age related face volume loss.

Materials and methods: 390 patients aging from 21 to 79 year underwent fat nanograft and micrograft mixed with PRP to correct face wrinkles and age related face volume loss.

Prp has been harvested by means of a separation gel kit.

213 patients underwent fatgraft with a standard open system, while 187 with a new conception closed system, allowing to filter the fat faster and easily mix it with prp in the optimal 80:20 proportion.

All patients have been evaluated by means of clinical and photographic examination 1, 3, 6 and 12 months after correction.

Results: The two methods showed comparable effectiveness. The closed system decreases the time required for fat harvesting, most of all due to the lesser time required to separate the fat tissue from the blood and from the adipocytes derived oil. Even the ideal proportion of 80:20 between fat and PRP is obtained with greater speed and accuracy. Being a closed system it ideally decreases the already minor risk of infections.

Conclusions: This is a preliminary study showing the effectiveness of a closed system for washing fat and mixing it with prp. A closed system improves the speed of the procedure, minimizes risk of infection and give exact idea of the volume of fat to be injected.

Resume: Fat micro and nanograft and PRP are regenerative medicine alternatives to the use of alloplastic filler in aesthetic medicine. In this study we introduce our experience over fat harvesting using a new conception cannula and closed system, which in our practice reduced the time for fat harvesting and improved the quality of the fat injected, being the fat more oil and blood free and optimized for fat survival.

Intraoral Rejuvenation with the Fractional CO_2 Laser

Dinko Kaliterna, Croatia

For the first time the Fractional CO_2 Laser is used for the intraoral rejuvenation. The idea is with the specially designed tip treat intraoral mucosa to have closer contact with the dermis. Because of that the result is better. The treatment is safe, painless and with no down time.

The results are seen more immediately after the treatment and became better over the next 9 months. With this treatment we can shape the middle face and the lower part. It is especially suitable for cheek elevation and reduction of wrinkles. This treatment represents significant advantage for the face rejuvenation.

Conclusion: This treatment represents a significant breakthrough not only for the prevention of face sagging but also for the shaping of the face.

Comparison of Dual Wavelength Long-Pulsed 755-nm Alexandrite/1064-nm Neodymium:yttrium-aluminum-garnet Laser Versus 585-nm Pulsed Dye Laser Treatment for Rosacea

Won-Serk Kim, Jung-In Kim, South Korea

Background: 585nm pulsed dye laser (585-PDL) is typical laser used for rosacea treatment, but the high running cost and toxicity of dye kit are its drawbacks. Accordingly, we need other laser could overcome the drawbacks.

Objective: To compare the effectiveness of the dual wavelength long-pulsed 755nm alexandrite/1064nm neodymium:yttrium-aluminum-garnet laser (755-LP Alex & 1064-LP Nd:YAG) with that of 585-PDL for rosacea.

Methods: This was a randomized, single-blinded, comparative study. All patients received four consecutive monthly treatments with 755-LP Alex & 1064-LP Nd:YAG or 585-PDL, followed-up for 6 months after final treatment. Erythema index was measured by spectrophotometer, and photographs were evaluated by blinded dermatologists for physician's global assessment. Subjective satisfaction surveys and adverse effects were recorded.

Results: 37 subjects were enrolled [19=585-PDL, 18=755-LP Alex & 1064 LP Nd:YAG]. There were no significant differences between 755-LP Alex & 1064-LP Nd:YAG and 585-PDL in the mean reduction of the erythema index (P=0.812; 3.6% vs 2.8%), improvement of physician's global assessment (P=1.000; 88.9% vs 89.5%), and subject-rated treatment satisfaction (P=0.842; 77.8% vs 84.2%). 585-PDL showed more adverse effects including vesicles than 755-LP Alex & 1064-LP Nd:YAG (P=0.046; 26.3% vs 0.0%). No other serious or permanent adverse events were observed in both treatments.

Conclusions: Both 755-LP Alex & 1064-LP Nd:YAG and 585-PDL are effective for rosacea, but 755-LP Alex & 1064 LP. Nd:YAG may be safer than 585-PDL. Conclusively, 755-LP Alex & 1064-LP Nd:YAG could be a good laser doing 585-PDL replacement.

Mitochondrial Specific Peptides in Anti-Aging and Therapeutic Rejuvenation: An Innovative Fusion of Mitochondrial Medicine and Cellular Therapy

Dmytro Klokol, Malaysia

The main factor contributing to tissue aging and degeneration is cellular senescence, a phenomenon characterized by cessation of cell proliferation as a response to continuous exogenous and endogenous stress and damage. Recently it has been shown that telomere shortening and DNA damage launches the cascade of signaling affecting the mitochondrial biogenesis, increasing the production of reactive oxygen species and promoting cell cycle arrest, hence is responsible for aging process. Latest research is focused on attempts of mitochondrial DNA replacement or depletion of mitochondria from the cell. However, our approach to anti-aging therapeutic strategy is based on restoring and modulating the mitochondrial activity by administering the preparation, containing the combination of organ-specific mitochondria exported peptides, which reduce the apoptosis rate and production of reactive oxygen species and enhance mitochondrial metabolism.

The study involved 17 volunteers in the age 58-72 years old with various pathology and age-related conditions. All of them received intramuscular injections of standardized rejuvenation-revitalization combination of mitochondrial specific peptides. Rejuvenation-revitalization protocol included administering of peptides twice weekly during 8 weeks. The levels of main reactive oxygen species were measured before and after treatment.

The following results were obtained: the mean plasma level of reduced glutathione increased from 2.9±0.03 to 4.3±0.04 and the ratio of oxidized to reduced glutathione

reduced; level of superoxide dismutase showed significant increment tendency in all patients; levels of Humanin peptide and Small Humanin-like peptides became significantly improved in all patients.

Application of organ-targeted mitochondria-derived proteins may improve three major mitochondrial functions: apoptosis, metabolism, and oxidative stress. Hence, this effective method of rejuvenation-revitalization may have positive application in internal, holistic and esthetic medicine.

A Split Scar Comparison Study of Hypertrophic Scar Treatment with Fractional Laser vs. Fractional Laser-Assisted Topical Corticosteroids Delivery

Woraphong Manuskiatti, Arisa Kaewkes, Puntarika Phankosol, and Rungsima Wanitphakdeedecha, Thailand

Background: Intralesional corticosteroids injection remains a gold standard treatment for hypertrophic scars but it is associated with pain during injection and is often complicated with side effects including skin atrophy, telangiectasia, hypopigmentation, hypertrichosis and acneiform eruption. Recent studied suggest fractional ablative lasers (FALs) may be used to facilitate delivery of topical drug into the skin by creating channels between epidermis and dermis.

Objective: We sought to compare the effectiveness for scar therapy and side effects of FAL alone with FAL-assisted topical corticosteroids delivery.

Methods: On each of 20 patients, hypertrophic scars were divided into two segments. Both segments on all patients were randomly treated with a fractional Er:YAG laser alone (a fluence of 28 J/cm2, pulse widths of 300 μs and 5% coverage), and a fractional Er:YAG laser, followed by immediate post-operative topical application of clobetasol ointment to both segments, every 2 weeks for a total of four treatments. Scar thickness and the patient and observer scar assessment scale (POSAS) were assessed by two blinded dermatologists and all study subjects at baseline, 2 weeks after the 2nd treatment, and 1, 3, and 6 months after the final treatment.

Results: The scar thickness of segments treated with FAL alone and FAL plus topical clobetasol decreased significantly after two treatments ($p < .001$). Scar improvement progressed significantly from 1- to 6-month follow-up ($p < .001$). There was no significant difference in scar thickness reduction between two treatment methods at all follow-up visits ($p = .945$). Reduction in scar thickness corresponded to the subjective evaluation of scar vascularity, pigmentation, pigmentation, thickness, irregularity, pliability using POSAS score. No adverse effect was observed on any of the treatment sites.

Conclusions: FAL alone is safe and effective for treatment of hypertrophic scar. Application of clobetasol ointment provides no synergistic effect to FAL.

Dual Laser Toning Technique for Skin Rejuvenation and Pigmentary Disorders in Indian Skin

Vivek Mehta, India

Background: Laser Toning is well accepted technique that involves use of Q switch Nd Yag Laser with a large spot size in combination with very low fluence to treat pigmentary disorders.

Purpose: As we face everyday challenge to improve our treatment outcomes, we have used dual laser toning technique for Skin Rejuvenation and Pigmentary Disorders in Indian Skin.

Material and Methods: 30 Patients with Pigmentary disorders of varied origin including melasma, Lichen Planus Pigmentosus, PIH, Reihl's melanosis, seborrheic melanosis etc and those coming for skin rejuvenation were subjected to dual laser toning- genesis mode followed by top hat beam Q switched Nd Yag mode .

Discussion: Dual Laser toning seems to be a new technique of Q Switch Nd Yag Laser that has increased effectiveness while maintaining safety in treating pigmentary disorders and skin rejuvenation.

New Kudzu Acetic Acid Peel Act as an Estrogen Supplement for Aged Skin

Joon Hong Min, Ju-Yeon Choi, Jae Yun Lim, Won-Serk Kim, South Korea

Background: Estrogens play a significant role in the maintenance of human skin. They improve collagen content and quality, increase skin thickness, maintain skin moisture and enhance vascularization. Despite the benefits of Estrogen, there is increased risk of breast cancer, endometrial cancer, stroke, and thromboembolic disease in Estrogen users. Phytoestrogens are estrogen-like substances produced by plants. These chemicals bind directly to estrogen receptors (ERs) to exert mixed agonist and antagonist effects and, therefore, they have been considered as potential contenders to a natural form of estrogen replacement. Kudzu is a semi-woody, perennial leguminous plant native to south eastern Asia, and is a rich source of phytoestrogen.

Material and Method: We took Kudzu acetic acid from the fermentation process and various in vivo and vitro studies were done. In vitro study using human fibroblast, animal study using hairless rat and preliminary human trial were done.

Results: Kudzu acetic acid showed antioxidant effect, increased collagen synsesis and regulated various signals related to skin homeostasis in cell and DNA microassay study. Increase of dermal thickness and modulation of hair cycle were detected in animal studies. Preliminary clinical trial in 12 female patients showed general skin rejuvenation after Kudzu acetic acid peel.

Conclusion: Chemical peel using Kudzu acetic acid is safe and effective treatment for skin aging. Most of all, treating the aging skin with the Estrogen-like effect may be new, innovative trial.

Use of the Q-Switched Nd:YAG Laser for the Treatment of Pigmentary Disorders in Egyptians

Amany Nassar, Egypt

Background and objective: Laser treatment of cutaneous pigmentation is one of the most interesting areas in cutaneous surgery. Our purpose was to study the efficacy of Q-switched Nd:YAG at 1064 nm and 532 nm for the treatment of some pigmented lesions in our locality in Egypt.

Methods: A total of 60 subjects were treated with the Q-switched Nd:YAG laser with fluences ranging from 8 to 10 J/cm 2 for dermal lesions and 2.5 – 5 J/cm 2 for epidermal lesions. The number of sessions ranged from one to six sittings for epidermal lesions, four to six sessions for dermal lesions, while the mixed group required two to three sessions.

Results: A total of 34 patients (56.7%) showed excellent response, seven patients (11.7%) showed good response, nine patients (15%) showed fair response and 10 (16.6%) showed poor response. Transient post inflammatory hyperpigmentation occurred in five patients (8.33%) and erythema in seven patients (11.66%). Complications were common in darker skin types V and VI.

Conclusion: The Q-switched Nd:YAG laser is an effective and safe technique for the treatment of pigmented skin lesions. Adverse hyperpigmentation can occur but is transient.

Vaccum Integrated 1540-nm Non Fractional Erbium:Glass Laser for the Treatment of Acne Scars

Yael Politi, Moshe Lapidoth, Israel

Introduction: Acne scars are a common result of inflammatory acne, affecting a high percentage of acne patients for some degree. Atrophic scars are the most prevalent form, presenting as dermal depressions caused by inflammatory degeneration of dermal collagen.

Mid-infrared laser skin interaction is characterized by its modest absorption in water and finite penetration to the upper papillary-superficial reticular dermis. Since collagen is a desirable laser target, 1540nm wavelength is amenable for collagen remodeling within the depressed area of atrophic scars.

Patients & Methods: This prospective study included 24 volunteers (10 men, 14 women) with post acne atrophic scars. Patients were treated with a mid-infrared 1540-nm Er:Glass laser (Alma Lasers Ltd. Caesarea, Israel) with integrated cooling - vaccum assisted technology. Acne scars were exposed to 3 stacked laser pulses, range between 400 – 600 mJ/Pulse using 4 mm spot size at 3Hz. Patients underwent 3 - 6 treatments every 2 – 3 weeks. Final results were assessed 1 & 3 months after final laser treatment. Before and after photography were captured by high resolution digital camera. Clinical evaluation was performed by two independent dermatologists on a scale from 1 (exacerbation) to 4 (75%-99% improvement). Satisfaction was evaluated both by physician and by patient as well as pain perception and adverse effects.

Results: All the patients demonstrated a moderate to significant improvement. Average improvement rate, was approximately 60% according to pre – post photographs comparison. Patient satisfaction rate was 4.2 (in a scale of 1 – 5). Side effects were minimal and transient: erythema, very mild transient vesicles, and mild pain or inconvenience.

Conclusion: Mid-infrared Er:Glass 1540-nm laser is safe and effective modality for the treatment of atrophic acne scars.

Radiofrequency Device for Facial Skin Laxity

Hayriye Saricaoglu, O. Zorlu, Turkey

Skin laxity is associated with chronological aging and exposure to solar radiation. Different nonsurgical methods have centered around those that destroy the epidermis and cause a dermal wound.

The aim of this study is to evaluate the safety and efficacy of radiofrequency device for the non-ablative treatment of facial wrinkles and skin laxity. Thirty four volunteers were subjected for this purpose. A total of four treatment sessions were performed at 5-10 days interval with Exilis radiofrequency device and clinical photographs of the faces were taken at baseline, 1 week, 3, and 6 months. Twenty five patients have moderate to significant improvement of facial wrinkles and facial skin laxity. Radiofrequency device appears to be an effective and safe treatment method for skin laxity.

A New Approach in Therapy of Traumatic Scars: Acoustic-Interference Technology- Er:YAG Laser (2940 nm) Equipped with the Special SMA Module

Natalia Volkova, Russia

Introduction: The aim of the study is to evaluate the efficacy of the treatment of traumatic scars with a new Er:YAG laser (2940 nm) associated with the special module SMA (Spatially Modulated Ablation). The SMA module provides the spatial distribution of energy flow in the 5 mm light spot with the creation of 50 micron alternating zones with minimum and maximum energy degree. The main idea of this method is the reconstruction of scar tissue with triggering synthesis of collagen without fibrosis. The mechanism is the microinjury of scar tissues caused by acoustic waves which penetrate up to 6 mm in depth and interfere with each other. Key features of the technology are only mechanical destruction without high temperature in the depth of the skin and absence of contact of damaged cells with oxygen.

Methods: We observed 75 outpatients with traumatic scars. Excluding criteria: internal chronic diseases, infections, skin diseases, pregnancy and lactation period, keloid scarring. The observation period was 6 months. An independent physician evaluator assessed the treatment outcomes using POSAS scale and 5-point grading scale (VAS).

Results: Of 75 patients, all patients successfully completed the study. All of the patients received laser treatment 3-5 times. We used an Er:YAG laser equipped with the SMA module: 3 Hz; 2,21-3,54 J/cm2. The recovery period was from 3 to 7 days. Complications of laser therapy did not occur. The changes of scar tissue were present with height, pliability, pigmentation and vascularity. After the final treatment, average percentage changes of POSAS were 64%. Based on physician's assessment, mean grade of VAS scale achieved 3,6.

Conclusions: The treatment of traumatic scars with the new Er:YAG laser equipped with the SMA module had a short recovery period and showed safety as well as high clinical efficacy and must be recommended as a new approach.

Platelets Rich Plasma (PRP) Gel Post Fractional Carbon Dioxide Laser Resurfacing for Atrophic Scars

Ahmed A. Youssef, Egypt

Introduction: Atrophic scars are known for being difficult to treat especially areas with poor blood supply e.g. tip of nose. Fractional carbon dioxide laser resurfacing (FxCR) has a remarkable effect on scar remodeling, and autologous platelet rich plasma (PRP) is known to enhance wound healing. We hypothesized that combined treatments by FxCR and PRP gel would manage atrophic scars more effectively.

Aim of the work: Determine the value of adding PRP gel in healing after FxCR as regards down time for healing and final outcome.

Materials & Methods: Nineteen patients with atrophic scars were treated by FxCR with variable settings for 5 sessions at 6-weeks interval. PRP was prepared from 9 ml blood collected in a tube prefilled with 1 ml anticoagulant solution followed by centrifugation 500 x g for 10 minutes, where PPP was separated, then 1000 x g for 7 minutes to separate PRP. PRP gel is allowed to form as platelet rich fibrin matrix membrane (PRFMM) by adding platelet poor plasma (PPP) to calcium gluconate 10% for induction of fibrin mesh network polymerization a sterilized dish and leaving it for 20 minutes in fridge at 40 C. PRP gel membrane (PRFMM) was applied immediately after each session for treated areas and kept for 5 days.

Discussion & Conclusion: Significant improvement for all cases with signs of revitalization (e.g. Elasticity, Colour, Texture).

Conclusion: PRP gel prepared in the form of PRFM provides a good scaffold for scar remodeling after FxCR. It acts as a reservoir for delivering growth factors (which have short half-life) from platelets and maintaining platelets concentration for enhancement of post FxCR ablative wound care.

THURSDAY, SEPTEMBER 2, 2016 9.00 – 11.00h

FREE COMMUNICATION: INDUSTRY

CHAIR: MAURICE ADATTO

Reduction in Adipose Tissue Volume Using a New High Power Radiofrequency Technology Combined with Infrared Light and Mechanical Manipulation for Body Contouring (VelaShape III™)

Maurice A. Adatto, Switzerland (for Syneron Candela)

Background & Objectives: Growing patient demand for youthful skin appearance and favourable body shape has led to the development of new non-invasive body contouring techniques. We have previously demonstrated that the combination of bipolar radiofrequency and optical energies with tissue manipulation is an efficient reshaping modality. This study investigated efficacy and safety of a new high-power version of this combined technology for adipose tissue reduction and skin tightening.

Study Design & Methods: This newest system designed for body contouring and cellulite improvement has new technical features, which include higher output of radiofrequency. This allows a better and faster increase in skin temperature, producing better collagen remodelling and fat reduction. 6 patients have been treated in three sessions at 2 week interval.

Results: After management of full abdomen, lower back & flanks a very nice improvement can be seen in volume & circumference reduction of every patient.

Conclusions: These first clinical cases treated with this new device are very promising, showing very nice improvement in volume reduction.

Treatment of Hematomas with High-Power 532 NM KTP Laser

Christine Dierickx, Belgium (for Cutera, Inc.)

Background: Hematomas are damaged or broken blood vessels bleeding underneath the skin. They typically appear as red or purple discolorations and are often categorized by size – petechial: less than 3 mm in diameter, purpura: 3 mm to 1 cm in diameter, and ecchymosis: 1-3 cm in diameter. During the healing process, hematomas typically change color from red-purple (Hemoglobin) to blue-green (Bilverdin), yellow (Bilirubin) and then finally return to normal appearance. The treatment of hematomas has become increasingly popular post aesthetic procedures to reduce undesirable side effects and downtime for patients. Current therapies for treating hematomas include oral and topical modalities as well as laser and light based devices. The objective of this study was to evaluate the efficacy of a high power 532 nm KTP laser for the treatment of hematomas.

Study: A series of patients presenting with procedural and injury induced hematomas were treated with a high-power 532 nm KTP laser. Initial treatments were delivered 24-48 hours post injury. Darker, denser hematomas were treated with 1 pass of the KTP laser while ligher hematomas were treated with 2-3 passes. Treatment parameters varied based on the age and color of the hematoma.

Results: Significant improvement in the hematomas was observed within 24 hours post laser treatment, with complete resolution 2 days post laser treatment.

Conclusion: Vascular lasers such as the high-power 532 nm KTP laser are effective in providing faster resolution in the treatment of hematomas with no downtime or adverse events.

Fat Cooling And Shock Wave for Body Contouring

Klaus Fritz, Germany (for ZIMMER MedizinSysteme GmbH)

Techniques using radiofrequencies, cavitation and noncavitation ultrasound, and carbon dioxide have been studied as treatments for noninvasive body contouring. Shockwaves are normally used in the treatment of musculoskeletal disorders, and cryolipolysis, a noninvasive method of destroying localized subcutaneous fat, causes programmed death and slow resorption of destroyed adipocytes.

Cryolipolysis treatments are normally performed for 60 minutes followed by a vigorous massage. It takes a few weeks for the adipocytes to break down and begin absorbing. For this reason there is a 2-month wait before a second treatment can be carried out.

The objective of this study was to combine weekly acoustic wave treatments (using the ZWave system by Zimmer MedizinSysteme) to see whether it was possible to speed the rate of fat absorption to allow shorter treatment intervals. We studied the combination treatment in 35 patients with Z Lipo and Z wave (Zimmer, Germany) and found a mean reduction in fat thickness after treatments was over 3 cm, with a mean 4.45 cm reduction in circumference. 3-minute acoustic wave treatments immediately after cryolipolysis and weekly for 3 more weeks results in twice the rate of fat absorption.

The findings show that the action of Lipolysis is a safe, effective, and well-tolerated noninvasive procedure for body contouring, it even could be an alternative to liposuction for patients who require only small or moderate amounts of adipose tissue and cellulite removal or are not suitable candidates for surgical approaches to body contouring.

A Cross-Cultural Study of Consumer Attitudes Toward Cellulite

Lisa Misell, USA (Merz, Inc.)

Background: Cellulite is an area of high unmet need in the aesthetic medicine arena, yet little data is available on its prevalence and bothersomeness outside the United States. A statistic of 85% of American women having cellulite is widely reported from a 1998 Harvard Women's Health Watch Study, but data in other countries has not been readily available.

Objectives: To obtain self-reported incidence levels of cellulite and its location on the thighs vs. buttocks among women outside the United States. Secondary objectives included evaluating and comparing women's attitudes toward cellulite by country, such as how long they have been bothered by cellulite and their motivation to seek treatment.

Methods: A total of 9322 women were screened in an online quantitative survey executed by a third party research firm. Individual country screening samples ranged from a high of 2149 in Russia to a low of 244 in Mexico in an effort to qualify at least 100 women per country who were recruited for additional survey questions. The specific countries from which women were recruited included the United Kingdom, Germany, France, Spain, Russia, Italy, Mexico, Brazil, Argentina, South Korea, Thailand, Australia, and Taiwan. Questionnaires were translated into each local language and reviewed for consumer friendliness. Screening criteria for follow-up attitudinal questions across countries included age (25 to 60 years), the requirement to self-report cellulite and be at least "somewhat motivated" to do something about it.

Results: In total, across all 13 countries combined, 58% of women indicated that they were at least "somewhat" to "extremely" concerned about cellulite. This was the primary measure of self-reported prevalence. Of the 13 countries surveyed, concern was greatest in Thailand (73%), Argentina (72%) and Brazil (72%). Women in the United Kingdom were least concerned (39%). Of those women globally who were bothered by cellulite, 82% said they have been bothered for longer than one year.

Across all countries, when women are concerned about cellulite, they are highly motivated to do something about it. In total, 84% of concerned women surveyed indicated they would act. Rates were highest in Mexico at 97%, and a majority were still motivated even in the countries with the lowest motivation rate: the UK, Korea and Australia (each at 73%).

Among the 1318 women who were eligible to continue the interview, 92% indicated they had cellulite on their thighs, 74% indicated they had cellulite on their buttocks, and 23% indicated they had cellulite somewhere else (multiple responses allowed).

When asked to characterize the appearance of cellulite, women across all countries who reported cellulite on their thighs and/or buttocks were almost evenly divided between: "primarily dimples or depressions" (30%), primarily \cottage cheese\" or \"orange peel\" (37%), "both types about equally" (32%).

Conclusion: A high percentage of women globally, in addition to the United States, report having cellulite, as measured by "somewhat to extreme concern" about the condition. They are also highly motivated to do something about it. Thighs are most frequently reported as the area of the body with cellulite, with a vast majority of women also reporting the condition on the buttocks. Women characterize the cellulite as "primarily dimples or depressions," "primarily cottage cheese or orange peel," and "both types," in approximately equal measure.

Acne Treatment with Selective Delivery of Light Absorbing Gold Particles and near-IR Optical Pulses

Dilip Paithankar, Cory Anderson, USA (Sebacia, Inc.)

Background: Like unwanted hair and vasculature, acne can be potentially targeted via selective photothermolysis of the sebaceous units. Since the endogenous absorption of near-IR laser light by sebaceous follicles is small, follicular absorption of light by selective delivery of light absorbing, inert, sub-micron gold microparticles into the follicles.

Pre-Clinical Studies: In ex vivo, in vivo porcine and human skin, vibratory massage was found to be capable of introducing the sub-micron particles deeply into the infundibulum and sebaceous glands and produce selective follicular thermal injury with optical pulses. Porcine studies indicated skin gold levels returning to baseline in 1-month.

Clinical Studies: Two Ethics Committee approved prospective, randomized, controlled studies were performed; the primary end-point was change in inflammatory lesion count (details in Ref. 1). In both studies, moderate to severe acne subjects were treated three times, either two (Study-1) or one (Study-2) weeks apart. After massage of particle suspension, two passes of optical pulses at 800-810 nm,

30 ms duration, and 33.5 J/cm2 mean input energy density were applied. Transient erythema, edema were noted; treatment was well tolerated. The reduction in mean lesion count in the treated arm was 61% at 28 weeks post-baseline in Study-1 and 53% at 16 weeks post baseline in Study-2 and statistically significant over control. Another study with 1064 nm Nd:YAG laser yielded similar results (Ref. 2).

Conclusions: A treatment of topically delivered chromophore consisting of near-IR absorbing gold microparticles, followed by 810-nm or 1064-nm optical pulses appears to be successful, well tolerated, and safe for treating acne vulgaris.

References:

1. Paithankar, et al., J Invest Dermatol., 2015, 135, 1727-34.
2. Owczarek, et al., ASLMS Annual Meeting, 2016.

Combination of Acoustic Wave Therapy (AWT®) and Vacuum Therapy for the Treatment of Cellulite With a Lymphatic Problem

Corry Ullrich, Switzerland (Storz Medical AG)

Introduction: Cellulite affects 95% of women and can lead to negative skin appearance. In many of these cases the reduced lymphatic flow plays a major role and has to get activated. Recent studies show that vacuum therapy activates the lymphatic flow and that acoustic wave therapy is efficient in regard to cellulite and the skin texture. Therefore, there is a legitimate idea to combine these therapies.

Materials & Methods: The D-ACTOR® 200 »ultra« from STORZ MEDICAL AG, Switzerland it's the first the device on the market that combines AWT® and vacuum therapy. The vacuum therapy »VACU-ACTOR®« can be used in constant or intermittent mode. For the activation of the lymphatic in the intermittent mode is recommended. Depending on the setting, the tissue is sucked and released up to 300 times per minute. The VACU-Cups are available in four sizes to make sure that it's possible to work all over the body. In the therapy of cellulite you activate the lymphatic flow with the VACU-ACTOR® before you start with the AWT®. It's important to follow the approach of the classic lymphatic drainage. After starting to open the lymph knots it's necessary to work in the direction of the lymphatic flow. The next step is the AWT® treatment. The AWT® treatment is performed with a radial acoustic wave. The mechanical stimulation leads to an increase of the blood flow and metabolism. The acoustic wave therapy supports an improvement of the elasticity and the skin texture. A combined session takes about 45 minutes to treat both legs and the glutes. Both technologies guarantee an optimal mobilization of connective tissue, muscles and fasciae.

Conclusions: The D-ACTOR® 200 »ultra« supports the treatment of cellulite in a safe and evidence-based way. To combine both technologies in one device makes the treatment efficient from an economical and therapeutical point of view.

Nova Cutis – Liquidimplant: Implant Beauty!

Arash Younessi, USA (NovaCutis, Inc.)

Introduction: Filler injections by hyaluronic acid are one of the top-rated and most wanted treatments in aesthetics.

Objective: To discuss the concept of hyaluronic acid (HA) injections using the Liquidimplant range.

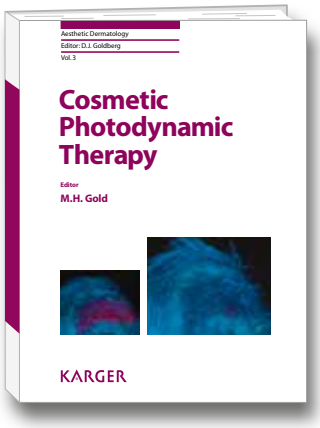
Material & Methods: The specifics and the features of the Liquidimplant filler range will be discussed in order to understand and enable the physician to use this specific filler range in an intelligent, suited and area- and indication-specific way: from filling lines and wrinkles to the 3-dimensional restoration of lost volume, shape and lift.

Conclusion: The Liquidimplant hyaluronic acid filler range will be showcased as a complete range of HA fillers to be used from line filling up to 3-dimensional facial shaping and volume restoration.

Book signing

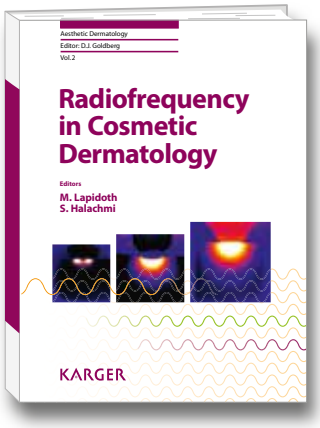
Thursday, 1 September, 1.30-2.30 pm
@ Karger Publishers booth (#57)

50% congress discount
on the list price for 5CC participants



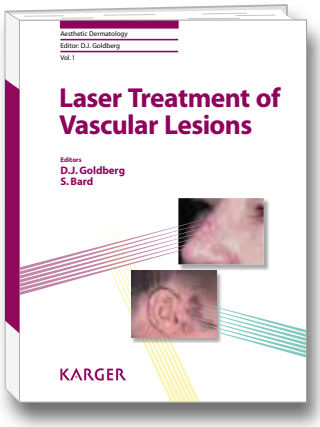
Michael H. Gold

Aesthetic Dermatology Vol. 3
Cosmetic Photodynamic Therapy



Moshe Lapidoth

Aesthetic Dermatology Vol. 2
Radiofrequency in Cosmetic Dermatology



David J. Goldberg

Aesthetic Dermatology Vol. 1
Laser Treatment of Vascular Lesions

KARGER